

Railway Age

JUNE 5, 1943

Founded in 1856

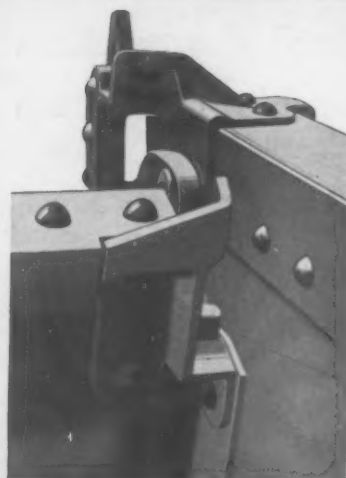
RIGID

...AS A
SOLID END CAR

THE LARGEST OF
GONDOLA
VEHICLE TYPES

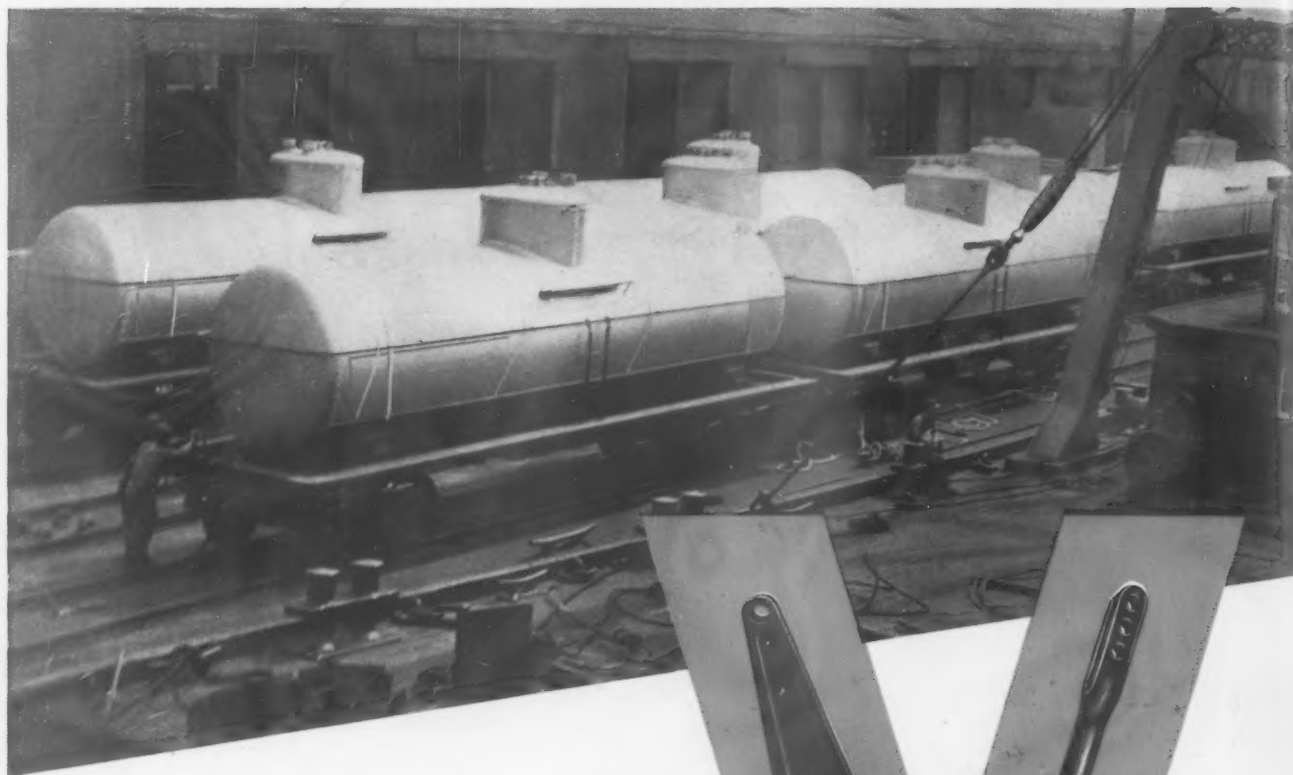
MAR 29 1944

**STURDY RUGGED
INTER-LOCKING
TOP CORNER**



**THE WINE
RAILWAY APPLIANCE CO.
TOLEDO, OHIO**

**DROP END LOCK
FOR GONDOLA CARS**



Millions of gallons of high octane gasoline for the war birds of the Allied Nations travels the first leg of its journey in tank cars, most of them equipped with Schaefer Forged Steel Foundation Brake Gear Appliances.

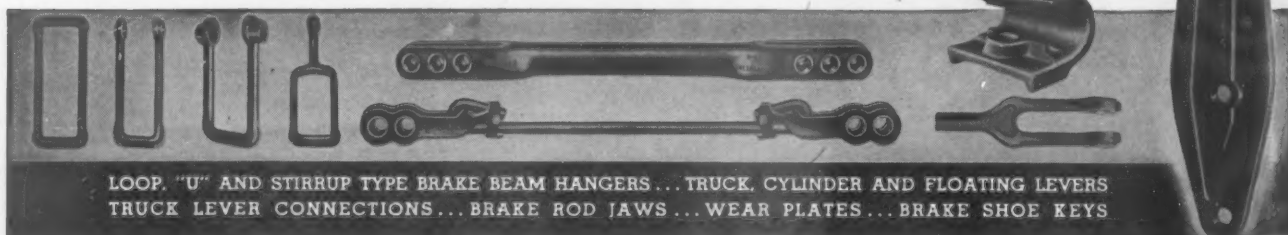


Railroads interested in a regular equipment-repair program should weigh the value of Schaefer equipment in the light of its sound structure and its longer service life.

Schaefer
KOPPERS

**EQUIPMENT
COMPANY**

BUILDING • PITTSBURGH, PA.



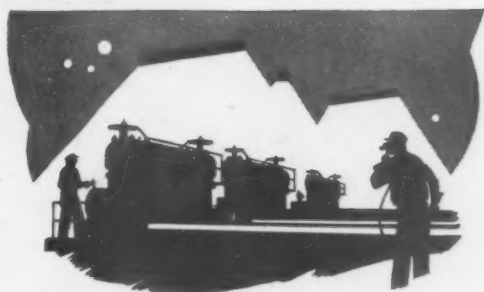
LOOP, "U" AND STIRRUP TYPE BRAKE BEAM HANGERS... TRUCK CYLINDER AND FLOATING LEVERS
TRUCK LEVER CONNECTIONS... BRAKE ROD JAWS... WEAR PLATES... BRAKE SHOE KEYS

Special trackwork for Army DESIGNED



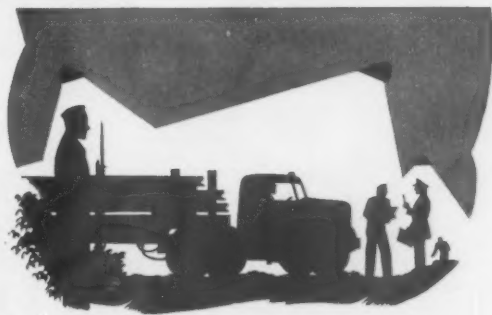
At 11 a.m. on Saturday the ninth of last January a call came to Bethlehem from an Army training center in eastern Pennsylvania. An armored division was coming in the following Tuesday morning and the camp lacked adequate track facilities for detraining. An emergency shipment of special trackwork was needed—immediately.

BUILT



Saturday afternoon Bethlehem engineers made a survey to determine the requirements in detail. Saturday night plans and shop drawings were prepared. All Sunday and through until early Monday the shops worked on the order. They curved, bent, and specially drilled 1296 feet of rail. They fabricated 96 angle-bar type joint plates, 64 forged and machined angle-bar type compromise joint plates, and 328 special length joint bolts, complete with nuts and spring washers.

DELIVERED



Meanwhile, the plant rounded up two trucks with the extra-long bodies necessary to handle the trackwork. As the work came off the machines, it was rushed into the trucks which then started rolling toward the training center. As the trucks arrived, Army details unloaded the material and laid the trackwork. When the troop trains arrived the following morning the entire installation was ready.

The preliminary on-the-ground survey had been made, working drawings prepared, the special trackwork manufactured and trucked from the plant to the site—all in about 50 hours.

in 50 hours




10 new giant

Baldwins

for the Duluth, Missabe & Iron Range





Since 1883, Baldwin locomotives have been serving the lines which now comprise the Duluth, Missabe and Iron Range Railway. This road forms one of the vital links between the great open-pit iron mines of Northern Minnesota and the Lake Superior shipping points.

Among the world's most powerful steam locomotives are the mammoth 2-8-8-4 type, single-expansion, articulated engines used on this road. Eight of these were delivered by Baldwin in 1941 and ten more have just been placed in service.

As never before, America needs its railroads to transport military equipment and men—to haul the coal, iron ore, and other raw materials to industries producing the sinews of war—to bring food and other necessities of life to soldier and civilian alike.

As never before, the railroads are utilizing the inherent advantages of modern steam power to haul these great tonnage trains over the road. With steam and diesel locomotives, military tanks, guns, and other war materials, Baldwin contributes to Victory.



Baldwin serves the nation



which the railroads

helped to build



THE
BALDWIN
LOCOMOTIVE WORKS
Philadelphia

DULUTH, MISSABE & IRON RANGE



RUGGED STANDARD FORGINGS BEAR THE BURDEN

Iron ore . . . more than 6000 gross tons per trip . . . hauling it from mine to market requires the world's most powerful locomotives. Upon the many steel forgings and castings rests a large share of the responsibility for unfailing motive power during the vital two-thirds of the year when Great Lakes traffic is open. Open hearth to finished product control of Standard's manufacturing processes assures the high quality which such service demands.



**STANDARD
STEEL WORKS**

DIVISION OF THE BALDWIN LOCOMOTIVE WORKS
PHILADELPHIA

FORGINGS • ROLLED WHEELS • TIRES • CASTINGS • SPRINGS

MALONE RUNS TWICE ACROSS A LADY

Roseby's Rock Station, on the upper Ohio River, is where the Port of Wheeling, Virginia, was linked by rail to the seaport of Baltimore, Maryland, on Christmas Eve, 1852.

It is also where Henry Malone ran his locomotive over eighteen-months-old Virginia Burke in 1913. Malone recently ran across the same Virginia Burke, and they had their pictures taken.

No sir. I've *NOT* joined the Liars' Club—

As a young engineer, in 1913, Malone, assisted by Fireman Murphy and Conductor Harry Fletcher, was rolling a coal train at thirty miles an hour. He'd passed a clear signal at Roseby's tower, and rounded a curve, when he saw a little girl in the center of his track, a hundred yards ahead.

Says Malone: I used the airbrake and emergency, reversed the engine on sand, gave it a full head of steam—200 pounds—in back-motion, struck the child gently—and stopped! In two seconds I was easing that child from under the axle of my rear tender-truck before she had time to get up.

She was crying, and hugging a rag doll. She had been scratched by track cinders but wasn't as badly scared as I was. I recognized her as the youngest child of the Burke family, who lived near the track.

Her father was pumper at the Roseby water station. He had just left her at his home with an apple and started to fill switch lights. She had followed him, seen me coming, and knew enough, when I knocked her over, to stay down between the rails.

I carried her to her father and mother, had a doctor examine her (he pronounced her uninjured), and got into my cab and started rolling. Sure, I was shaky—but not until I finished my run at Holloway, Ohio.

For twenty-eight more years I kept running for the same railroad without hurting anyone. Had kind of forgotten about that little Burke girl. Was hauling a passenger train, Number 44, when I stopped at Moundsville to get orders.

A very trim looking young lady asked me: "Is this Mr. Malone?"

"Yes ma'am." I replied.

She said: "Do you know who I am?"

Then I remembered seeing her around that station with her brother, who is an operator. "You're not the little girl I ran over at Roseby's Rock?" I demanded.

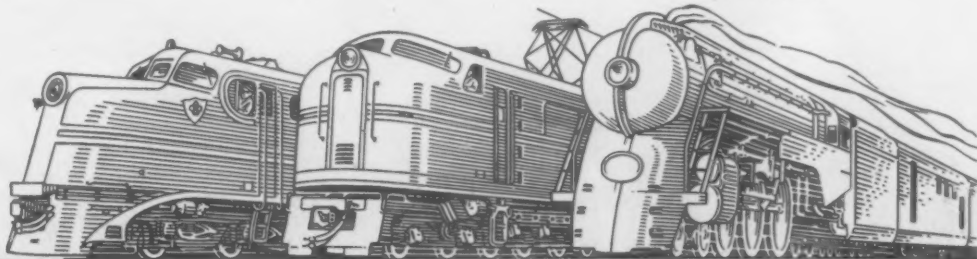
"Yes I am," she insisted.

"I'm sure glad to see you!" I told her.

A few days later the road photographer took our pictures, on the very spot where I had run over her.

So that is the story, and it just goes to prove that it's a tradition among more than a million American railroaders to think and act quickly in an emergency.

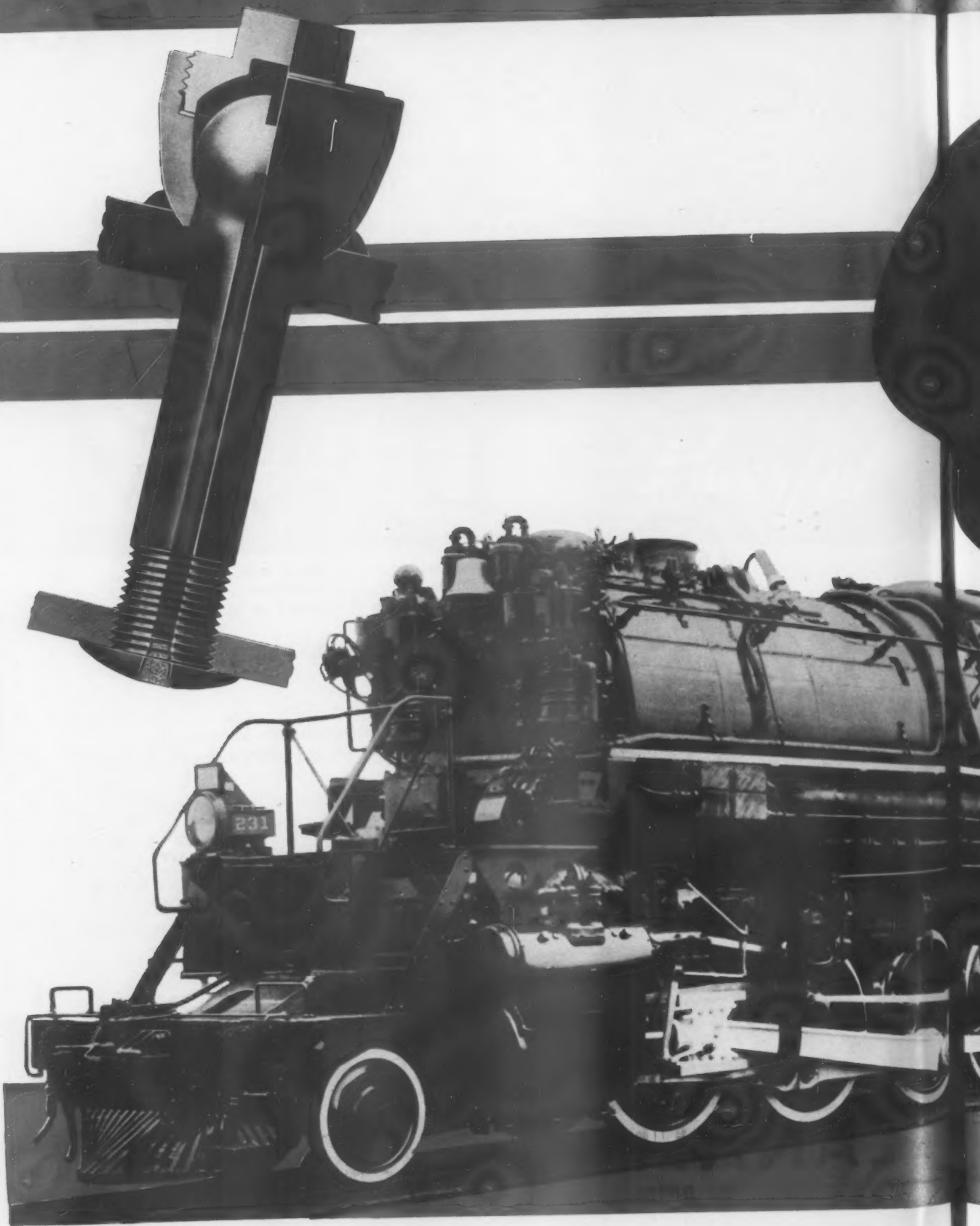
—The Trackwalker



AMERICAN LOCOMOTIVE • GENERAL ELECTRIC

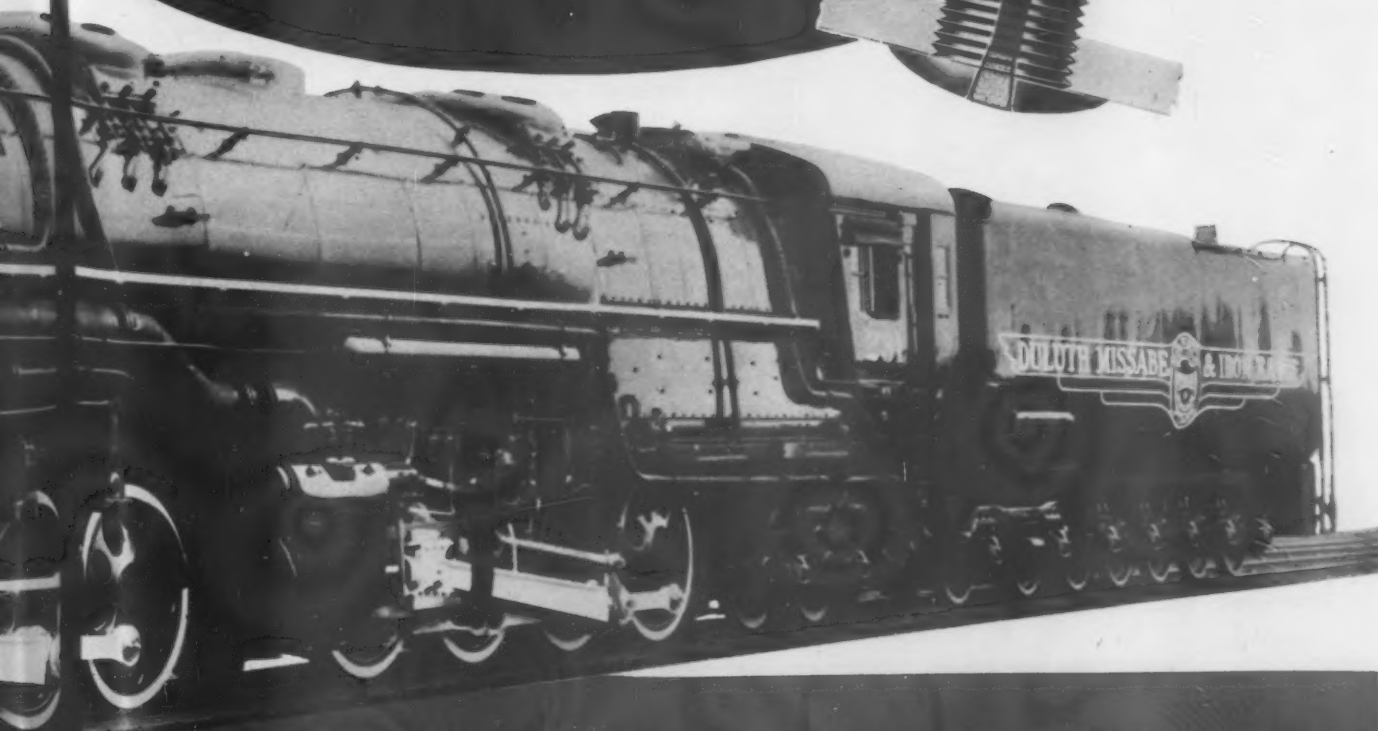
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On the Most Powerful Lo



Locomotives in the World

HOLLOW
Flexible
STAYBOLTS

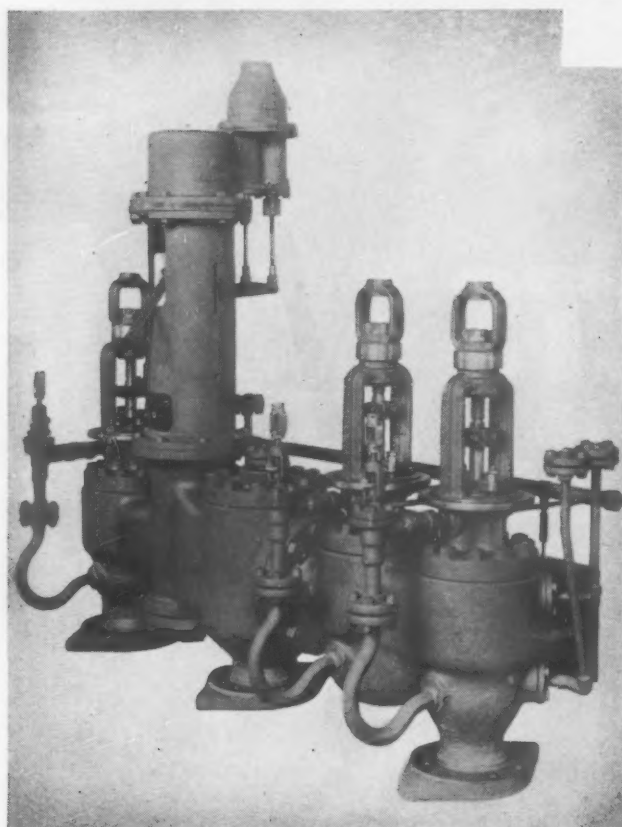


FLANNERY BOLT COMPANY

BRIDGEVILLE

PENNSYLVANIA

**For Nation
and
Industry**



Full Speed Ahead

L. F. M. production goes to sea. Above illustration shows one of the 6 inch Maneuvering Valves manufactured in our plant for C 2 and C 3 turbines on board vessels carrying supplies to our armed forces abroad.



Cross Section of
UNIVERSAL
Sectional Packing



Keep Power On The Road

THE biggest production job that American Industry has ever been called upon finds the L. F. M. plants busy 24 hours per day turning out vital machine tools, important valves for Navy and Merchant Vessels and increased outputs for the railroad industry.

Records prove that the power on American railways has been doing a magnificent job on the transportation front. L. F. M. Light Weight Pistons and Combination Sectional Packing has contributed greatly to the astonishing increase in monthly mileage and locomotive availability.

The L. F. M. combination of bronze and iron sectional packing rings is doing a wonderful job for the industry and nation. Its long wearing qualities and steam tight performance are the outstanding factors which contribute to the conservation of fuel and materials.

THE LOCOMOTIVE FINISHED MATERIAL CO.

NEW YORK CITY

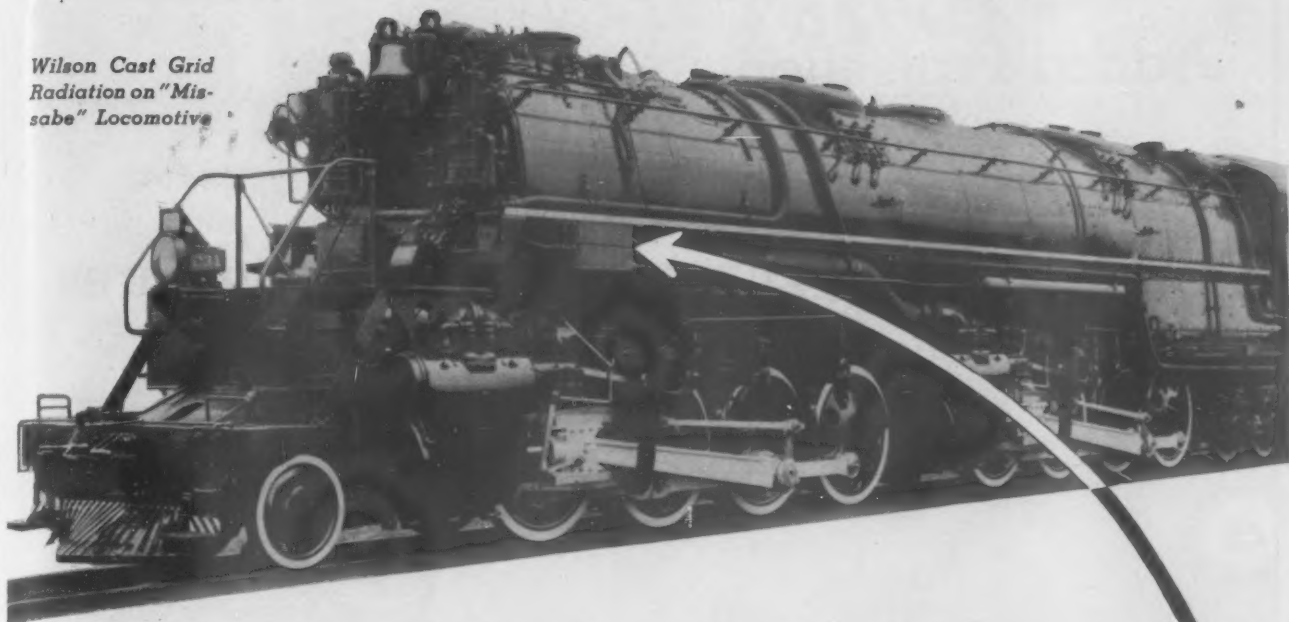
ATCHISON, KANSAS

CHICAGO, ILLINOIS



LIGHT WEIGHT PISTON
and Combination Sectional
BULL RING PACKING

Wilson Cast Grid
Radiation on "Mis-
sabe" Locomotive



Wilson Variable Radiation effects complete primary cooling

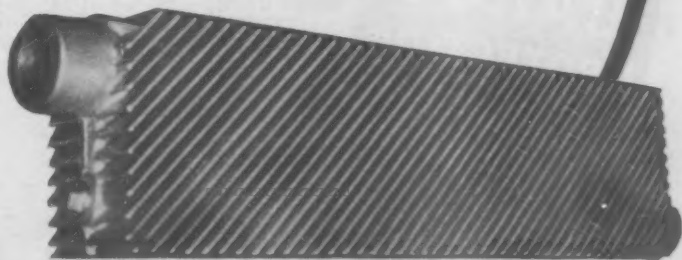
Trouble-producing moisture in locomotive compressed air must be precipitated . . . this is generally understood.

If *primary* cooling is complete and efficient *before* the air enters No. 1 main reservoir, all the moisture will be precipitated in the reservoir where it can be quickly removed.

And . . . the capacity of the reservoir is thus greatly increased. Due to the difference in density between hot and cold air, this increased reservoir capacity may be considerable.

Wilson Radiation presents an efficient and compact all-cast-iron grid element for either primary or after cooling. Its construction eliminates the use of such war-critical materials as steel or copper pipe.

And, Wilson Grid Radiation costs less . . . has the durability of cast iron . . . is tested to 500 pounds per square inch before shipment.



Wilson All-cast-iron Grid Elements

WILSON PRODUCTS

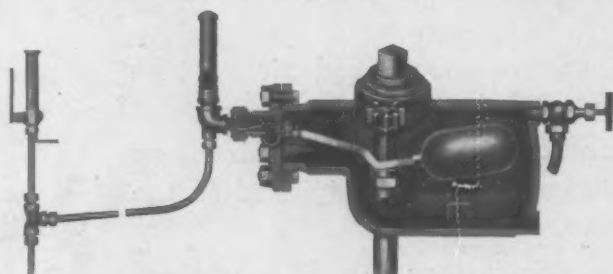
Unit Heaters • Blow-off Cocks
Mufflers or Separators
Feed Water Heaters



WILSON ENGINEERING CORP.

122 S. MICHIGAN AVENUE, CHICAGO, ILL.

Added Protection For D.M.&I.R. Locomotives Against Crown Sheet Failures



Sectional View of BARCO Low Water Alarm showing the float which is actuated solely by the height of the water in the boiler.

Operation depends on no other element. Low water level always blows whistles.

BARCO
PROTECTION
Costs Only
.0014
of Average
Locomotive Cost

BARCO TWO WHISTLE Low Water Alarm

With Locomotives and Operators Working to capacity under wartime pressure, the BARCO Low Water Alarm is a most logical protection against crown sheet failures due to low water in locomotive boilers.

The small whistle in the cab and the large whistle on the low water alarm located on top of the boiler sound simultaneous warning to the engine crews within fifty seconds after the water reaches the predetermined low point.

The price of the BARCO Low Water Alarm is ridiculously low compared to the protection it affords to the investment in motive power, crew and traveling public.

BARCO MANUFACTURING COMPANY

1800 W. Winnemac Ave.

NOT INCORPORATED

Chicago, Illinois

In Canada **THE HOLDEN COMPANY, LTD.**

Montreal

Moncton

Toronto

Winnipeg

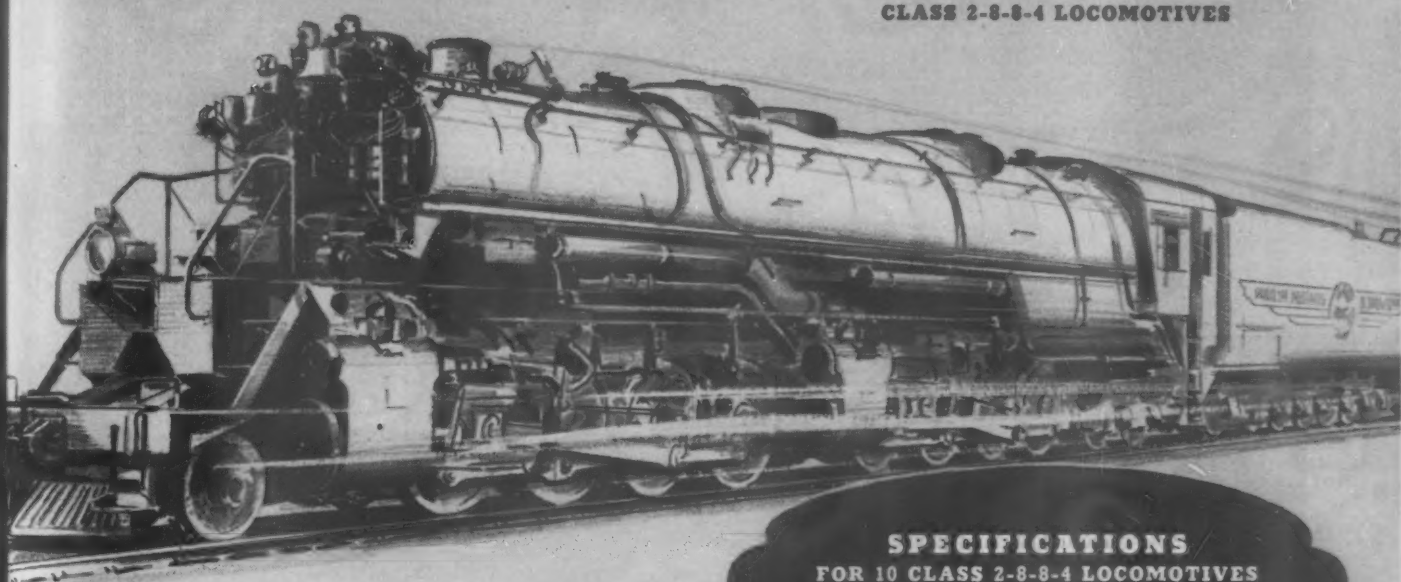
Vancouver

STANDARD STOKERS

ON ALL *10*



CLASS 2-8-8-4 LOCOMOTIVES



**KEEP 'EM
ROLLING
AT
TOP SPEED**

● These 10 new Standard Stoker equipped Baldwin Locomotives for Duluth, Missabe and Iron Range will keep more iron ore moving from mines to meet the record breaking 95,000,000 ton demand for ore this year. These 10 Standard MB Stokers join more than 16,000 other Standard Stokers to Keep 'Em Rolling at Top Speed.

SPECIFICATIONS

FOR 10 CLASS 2-8-8-4 LOCOMOTIVES
NOS. 228-237 FOR DULUTH, MISSABE
AND IRON RANGE R. R.

TRACTIVE FORCE	140,000 lbs.
WEIGHTS IN WORKING ORDER:	
On Drivers	565,000 lbs.
Total Engine	699,000 lbs.
Total Engine and Tender	1,138,000 lbs.
WHEEL BASES:	
Driving	45' 7"
Total Engine	67' 2"
Engine and Tender Total	113' 4 3/8"
DRIVING WHEELS, diameter outside tires	63"
CYLINDERS, number, diameter and stroke	(4) 26" x 32"
STEAM PRESSURE (working pressure)	240 lbs.
GRATE AREA	125 sq. ft.
HEATING SURFACES:	
Total heating	6,758 sq. ft.
Superheater	2,770 sq. ft.
TENDER COAL CAPACITY	26 tons
TENDER WATER CAPACITY	25,000 gallons.
STOKER	STANDARD Type MB
COAL PUSHER	STANDARD Type DA

THE STANDARD STOKER COMPANY, INC
NEW YORK • CHICAGO • ERIE •



TIME TESTED!

BUILT IN 1941

8 NEW LOCOMOTIVES

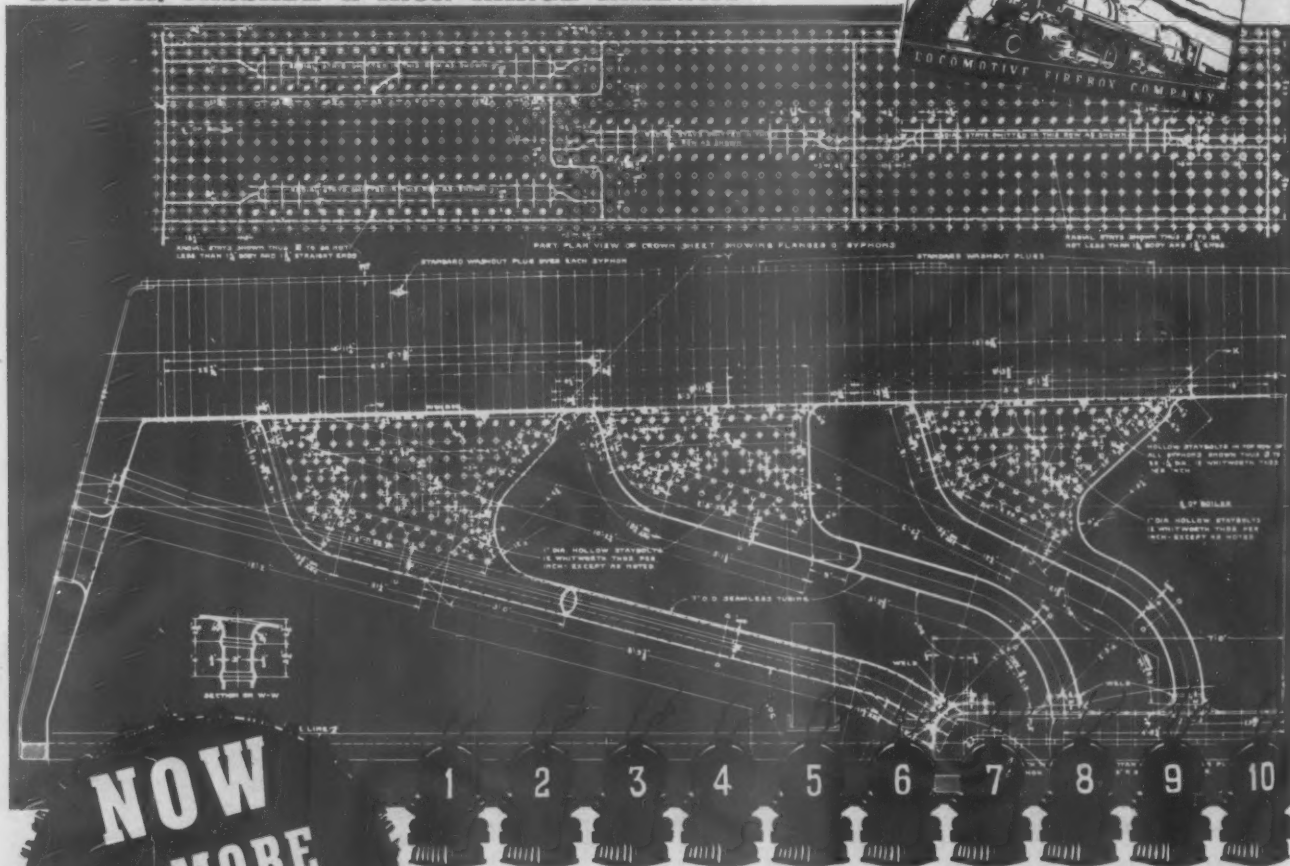
EQUIPPED WITH NICHOLSON THERMIC SYPHONS

ARE DOING A SPLENDID JOB FOR THE

DULUTH, MISSABE & IRON RANGE RAILWAY

IRON ORE FROM THE WORLD'S
MOST PRODUCTIVE MINES
ON THE MOVE - FOR DEFENSE

SYPHONS
-30%
TO THE NORMAL
HEATING SURFACE
OF THE FIREBOX
OF OVER 500 TONS
AND BOILER HORSEPOWER
EQUIPPED LOCOMOTIVES



**NOW
10 MORE
LOCOMOTIVES**
have been placed
in service . . .

Each equipped with four
NICHOLSON THERMIC
SYPHONS

for added boiler horsepower and safety from boiler explosion * * * * * These Syphons add nearly 30% to the normal 556 sq ft. of firebox heating surface.

Locomotive Firebox Company

NEW YORK

CHICAGO

MONTREAL

RAILWAY AGE

PHILCO RAILROAD BATTERIES

*ENGINEERED
FOR THE JOBS
TO BE DONE!*

Wherever storage batteries are required in railroad service, there's a rugged Philco specifically designed to do the job!

Philco Diesel Starting Batteries are always ready with a tremendous surge of power when it's needed. Rugged, dependable—you can count on a Philco for maximum service.

For Railroad Industrial Trucks, Philco XL Batteries give you 10% greater capacity at no increase in overall battery dimensions!

Philco Signal and Control Batteries have the famous Philco Floté element—the only battery construction specially designed for full float service.

Philco Car Lighting and Air-Conditioning Batteries are built to take severe service, day in and day out.

For new equipment or replacement, get the facts on Philco Batteries! Use the coupon for latest catalogs.

CAR LIGHTING — AIR CONDITIONING

ELECTRIC INDUSTRIAL TRUCKS

SIGNAL AND CONTROL

REPLACE WITH RUGGED, HIGH-CAPACITY

PHILCO RAILROAD BATTERIES

PHILCO CORPORATION
STORAGE BATTERY DIVISION, TRENTON, N. J.

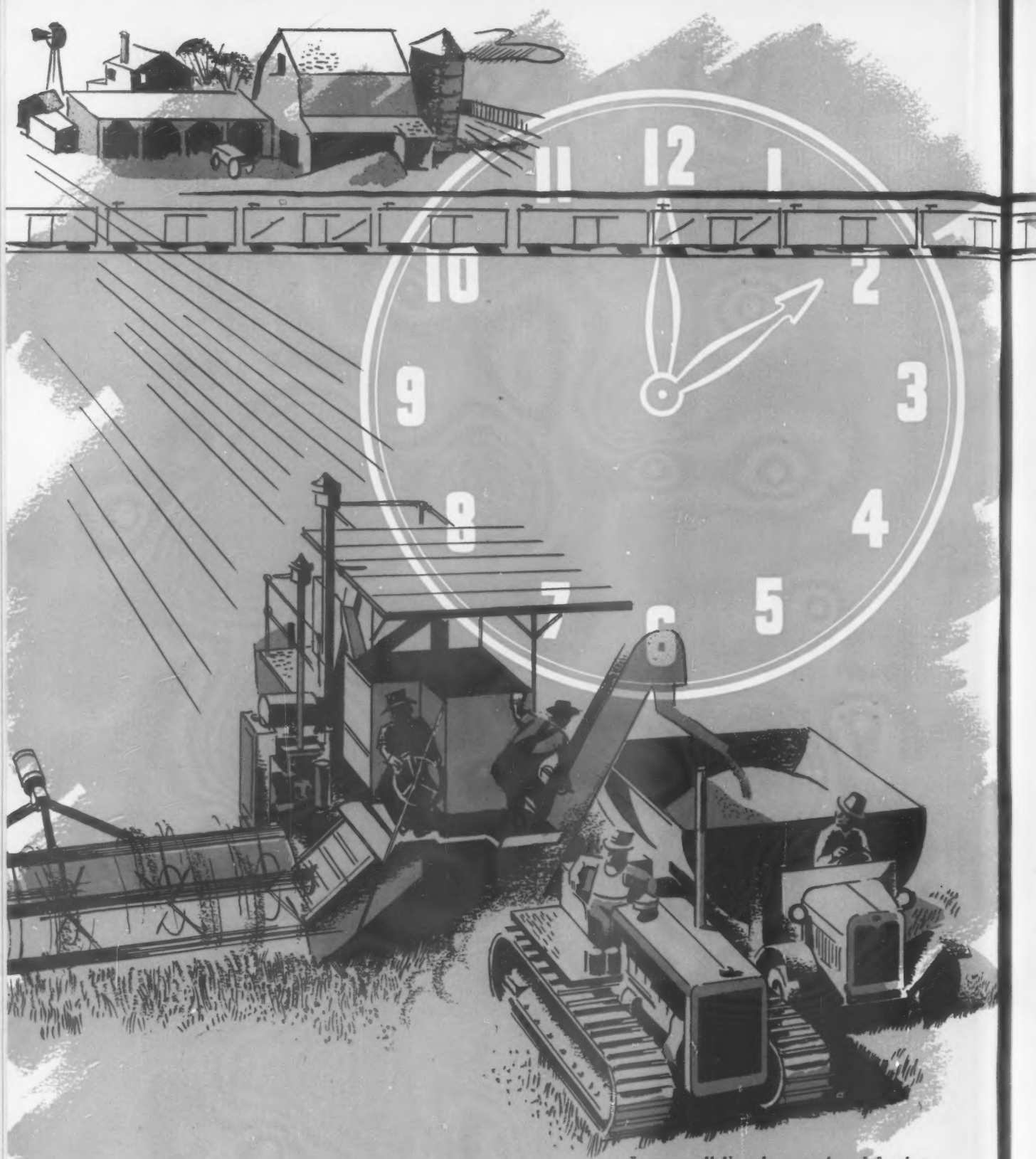
Send me latest Philco Railroad Battery catalogs.

NAME _____

COMPANY _____

ADDRESS _____



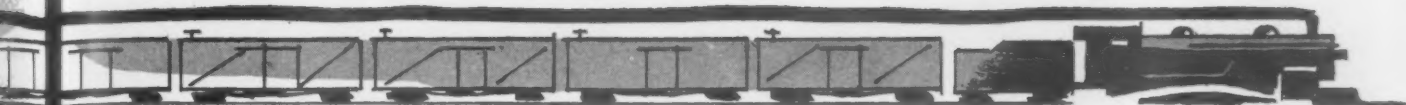


a.c.f.

AMERICAN CAR AND FOUNDRY COMPANY

NEW YORK • CHICAGO • ST. LOUIS • CLEVELAND • PHILADELPHIA • PITTSBURGH • ST. PAUL • SAN FRANCISCO

Long paralleling the growth and development of the railroads, A.C.F. has supplied them for 88 years with rolling stock of every kind—save locomotives, alone. Rolling stock which—like the railroads, themselves—has year after year played a greater and greater part in the service of the nation.



'Long about June 5th, *Regular as the clock,* THE BOX CARS START FOR KANSAS!

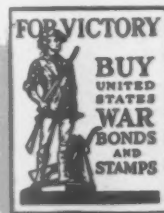
Each year our railroads must repeat the miracle of packing the nation's seemingly infinite acres of wheat into a very definitely finite number of freight cars. This year this operation must be super-imposed upon a heavy freight movement still busy with the carry-over of last year's crop.

As you read this, the box cars are starting once again on their annual pilgrimage. They're heading now for Kansas, Oklahoma and Texas. Later they'll work their way up through the Northwest.

Moving America's wheat crop is a triumph of railroad organization and operation. A bank of about 30,000 freight cars—to be drawn upon as needed—has to be provided for this three-state area, alone. A single railroad may here load as many as 2,500 cars with wheat in a single day. In all, perhaps 125,000 box cars will be used to move to the flour mills and terminal elevators the more than 200 million bushels of wheat grown here!

This year, as never before, this Staff of Life is vital to our nation and to our allies. Its progress must not be delayed for a single needless instant.

Nor will it be delayed! For even under the burdens of war, this traffic will be kept in full flow—thanks to redoubled care in the marshalling of our railroad transport facilities, and to the unrelenting toil of every railroad man concerned in the great task.





Work them hard,

but guard them well

Work your aluminum alloy cars and coaches hard; that's the kind of service they're intended for. Their lighter weight and sturdy construction make them easier on themselves, as well as faster on schedules and economical to operate. But, because they are such trustworthy workers, they deserve careful inspection and maintenance.

Alcoa Aluminum Alloys should be used in making repairs or replacements. The Association of American

Railroads and WPB, through its defense transportation agencies, have made it possible to obtain the metal needed to keep rolling stock on the job.

Often, you are able to do this work without requisitioning new materials. Alcoa engineers are prepared to advise you on ways of salvaging old parts and on all other phases of this maintenance work. If it is urgent, wire ALUMINUM COMPANY OF AMERICA, 2178 Gulf Building, Pittsburgh, Pennsylvania.

ALCOA  **ALUMINUM**



SCIENCE MEASURES FATIGUE

A Marine on a treadmill, slogging full-pack through tropical heat—that's how they test what a fighter can stand.... We have the same idea—with A. S. F. side frames, for instance. A fatigue machine crowds years of wear into hours of break-down testing. A. S. F. engineering and metallurgical research is developing better steel compositions and heat treatments, better designs... to carry forward the reputation of America's greatest steelcaster.

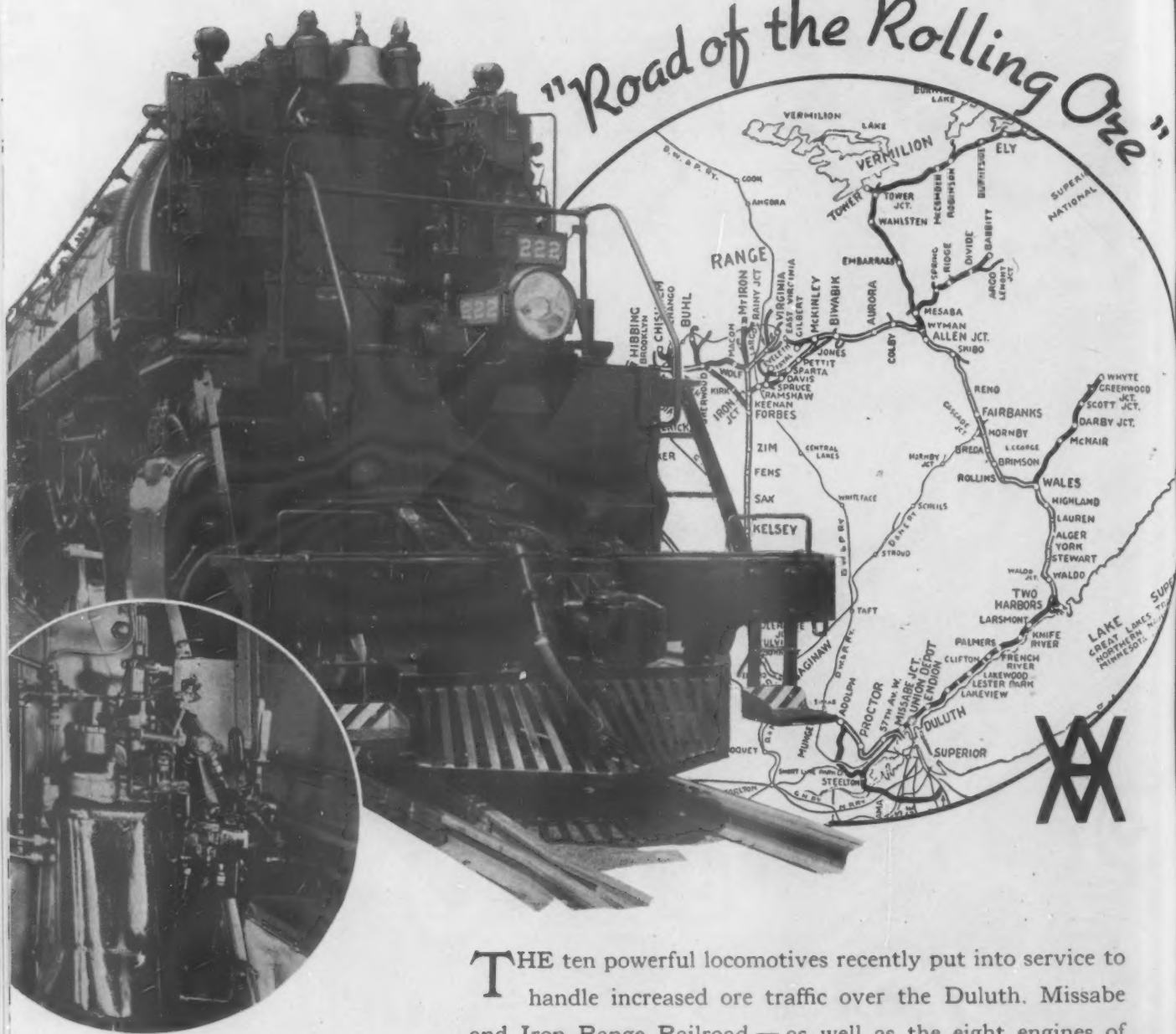
AMERICAN STEEL FOUNDRIES

CHICAGO

DIET MARK BY  FINE RACE STEEL

... MORE POWER to the

"Road of the Rolling Ore"



Continued reliable performance in rigorous service is assured by distinctive structural features embodied in detail apparatus of the No. 8-ET Equipment — such as: the Inlet Filter for air compressors; type U Brake Cylinders; Wabcotite Fittings on all connections, including main reservoirs, etc. . . . Our American Brake Division supplied the foundation brake rigging. * * * *

THE ten powerful locomotives recently put into service to handle increased ore traffic over the Duluth, Missabe and Iron Range Railroad — as well as the eight engines of similar type built two years ago — are equipped with our No. 8-ET Brake, which embodies the characteristics needed for satisfactory operation of modern freight trains . . . This equipment (in conjunction with AB Automatic Empty and Load Brakes on cars) provides for adequate control of heavy tonnage trains from mine to lake ports, and smooth handling of long empty trains at time-saving speeds on the return trip.

WESTINGHOUSE AIR BRAKE CO.

WILMERDING, PENNSYLVANIA

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

Vol. 114

June 5, 1943

No. 23

PUBLISHED EACH SATURDAY BY THE SIMMONS-BOARDMAN PUBLISHING CORPORATION, 1309 NOBLE STREET, PHILADELPHIA, PA., WITH EDITORIAL AND EXECUTIVE OFFICES AT 30 CHURCH STREET, NEW YORK, N. Y., AND 105 W. ADAMS STREET, CHICAGO, ILL.

WASHINGTON, D. C.: 1001 NATIONAL PRESS BUILDING. CLEVELAND: TERMINAL TOWER. SEATTLE: 1030 HENRY BUILDING. SAN FRANCISCO: 300 MONTGOMERY STREET, ROOMS 805-806. LOS ANGELES: 560 WEST 6th STREET.

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SUBSCRIPTIONS, INCLUDING 52 REGULAR WEEKLY ISSUES, AND SPECIAL DAILY EDITIONS PUBLISHED FROM TIME TO TIME IN NEW YORK, OR IN PLACES OTHER THAN NEW YORK, PAYABLE IN ADVANCE AND POSTAGE FREE. UNITED STATES, U. S. POSSESSIONS AND CANADA: 1 YEAR \$6.00; 2 YEARS, \$10.00; FOREIGN COUNTRIES, NOT INCLUDING DAILY EDITIONS: 1 YEAR, \$8.00; 2 YEARS, \$14.00. SINGLE COPIES, 25 CENTS EACH. H. E. McCANDLESS, CIRCULATION MANAGER, 30 CHURCH STREET, NEW YORK.

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The Material Situation and Its Effect on Freight Cars 1132

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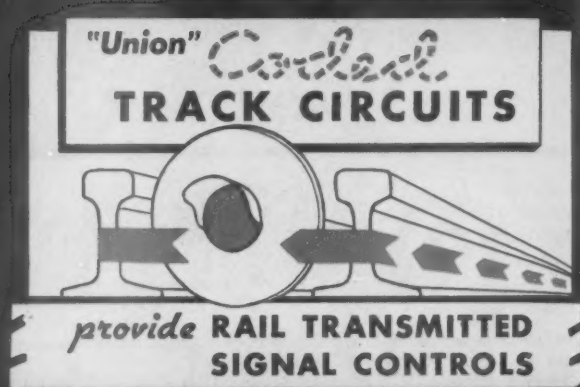
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The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service



PRINTED IN U. S. A.



INCREASED
= TRACK CAPACITY
+
CONSERVATION
OF CRITICAL
+
GREATER USE
OF EXISTING
EQUIPMENT

***This combination can produce
 the greatest increase in transportation capacity
 per unit of material employed!***

TWO modern "Union" Signaling Systems have been installed extensively during recent years to meet the pressing need for increased transportation capacity with a minimum use of critical materials.

"Union" Centralized Traffic Control has provided increased track capacity *quickly* where the carriers, under their former methods of operation, had more traffic than their locomotives could handle over their existing trackage.

"Union" Coded Track Circuit Control has provided rail-transmitted signal controls,

longer track circuits, better shunting sensitivity, foreign current protection and elimination of signal-control line wires.

In installations where *both* of these systems have been employed, track capacity has been increased through a more flexible and efficient method of train operation. Greater use of existing locomotives and cars has been obtained because freight trains have saved an average of over a minute a mile in C.T.C. territory. Line wires were greatly reduced or entirely eliminated and a substantial saving in the use of critical materials was accomplished.

UNION SWITCH & SIGNAL COMPANY
SWISSVALE, PA.

NEW YORK

CHICAGO

ST. LOUIS

SAN FRANCISCO

The Week at a Glance

SUBSTANDARD DIVIDENDS:

Since "hardship" or "substandard" arguments are being used successfully to thaw out the alleged "freeze" on wages, the just claims of railroad stockholders cannot continue to be slighted. A New Deal "emergency board"—in contradiction of the administration's proclaimed opposition to inflation—has recommended railway wage increases of more than 200 millions a year; money which will be deflected from taxes and reserves into bidding up prices of consumers' goods. Meantime, railroad stockholders received only 196 million dollars as dividends in 1942 (compared to 2932 millions paid in wages). Payments to stockholders in 1942 were 46 per cent less than the average for the 1920-30 period, whereas wage payments were somewhat more than the Twenties' average. An editorial herein suggests that dividends be increased, since private enterprise cannot function unless owners receive satisfactory remuneration, which nobody can contend they are now doing.

WARNS SUPPLY CO'S:

War plants, whose managers are looking around for post-war markets, have fixed their eyes on the railroads—and manufacturers already established in this field may be faced with some pretty vigorous competition. So Chief Engineer Perlman of the D. & R. G. W. revealed to members of the Railway Business Association, as recorded in the news pages herein. Mr. Perlman suggested that manufacturers seek now to improve their products and otherwise prepare themselves so that, by better service to their customers, they may continue to enjoy their trade. He also bespoke the co-operation of the supply manufacturers with the central research organization being established by the A. A. R.

OIL NEARS MILLION MARK:

The railroad petroleum movement creeps upward toward the goal of a million daily barrels. It is a case of the last 100 thousand—not the first 100—being the hardest. An article herein details the expedients being adopted to squeeze out the ultimate in performance from available facilities—these including the steady perfecting of routing arrangements, and the use of steel drums and other containers which convert non-tank cars into vehicles for petroleum products.

EFFICIENT YARD TOWERS:

Yard control towers which forethought has made convenient for the function they must serve—such as the facilities, described herein, provided by the Burlington at Galesburg yard. Fire-resistant, these towers have wide windows for unobstructed vision; heat-absorbing and glare-resisting glass; overhanging eaves; roof insulation; inside sanitation.

TAX-AIDED BUSINESS:

Some segments of business and industry apparently are finding it very hard to swallow the "free enterprise" medicine which leaders

of industry are prescribing with such vigor, intelligence and apparent sincerity. An editorial herein reports a speech by a leading spokesman for the automotive manufacturers who predicts a rosy post-war future for his industry *predicated upon large-scale government spending in improving highways around cities*, thereby extending the market for motor vehicles. In other words, he foresees greater prosperity in highway transportation—but only at the price of greater socialization; making his program very hard, indeed, to distinguish from the fondest dreams of the National Resources Planning Board.

WHO PAYS THE FIDDLER:

The speaker mentioned in the foregoing fearlessly demanded freedom for the transportation industry from federal meddling—that is, so far as regulation and otherwise policing the industry's operations is concerned. In this area of government relations to business he is an individualist of the most rugged stripe. But he does not carry his opposition to governmental participation to the impractical length of refusing federal funds for additions to plant. No indeed. The railroads are the only segment of the general transportation industry so quixotic as to refuse such proffered gold—which might enrich them but would tarnish their principles. Their less squeamish neighbors seem to deem the pay which comes their way an ample recompense for the socialization they thereby accept; and they eagerly and openly solicit for more.

MONEY FOR STUDY BOARD:

The Senate has passed and sent to conference its version of an appropriation bill—included in which is \$350,000 to continue for another year the work of the Board of Investigation and Research, operating under the Transportation Act of 1940. The Senate also, sad to relate, threw in \$200,000 for the National Resources Planning Board—the group of sociologists, landscape gardeners and do-gooders which, without statutory authority, has adopted a revised "Bill of Rights" and is otherwise scheming to make the country over on a socialistic pattern of bureaucratic paternalism.

BORROWING TO SAVE:

The B. & O. has been authorized by the I. C. C. to finance 3½ million dollars' worth of new equipment by selling a trust issue covering practically the entire cost of the purchase. Some question had arisen of the I. C. C.'s view of this transaction, but it took its position because the railroad proposed to use the cash, which it might have used to defray all or part of the cost of the equipment, to buy in funded debt at a discount. That is to say—despite new equipment issues—the company's action will reduce its indebtedness more than if it paid for its equipment all or part in cash; and reduction in fixed charges will be greater too.

BAD NEWS FROM WPB: Some hint of the enormous complexity of the process of materials distribution—when it is done by allocators rather than by normal market action—is given herein in an able paper by W. P. B.'s D. W. Odiorne. The Rolling Stock Chief also reveals the meager outlook for adequate additions to equipment. There are, in addition to the O. D. T., no less than eight other "claimant agencies" for railroad rolling stock.

OP EMERGENCY BOARD:

The emergency board which will begin at New York on June 7 its hearing of the demands of the transportation unions for 30 per cent more money (a minimum increase of \$3 per day) is composed of three "old-timers" at this class of work. Heading the board is Judge Stacy, who was on the board which refused to reduce wages along with the catastrophic decline in railway earnings in 1928. Another member is Professor Sharfman, who just finished handling the non-ops more than 200 million dollars a year of the railroads' money—despite the fact that their pay status already satisfied the "Little Steel" formula. The third member is Frank Swacker, who was on the board which denied to engine crews most of their "Diesel pay" claims.

ENGINE LEADERS ANGERED:

It would be an understatement to record that the hierarchy of the engine unions are dissatisfied at the recommendations of the board which heard the Diesel pay case. They say they have been "insulted." What is an emergency board for—they seem to believe—if not to prevent concessions to railroads when they are hard pressed, while conversely blindly awarding to unions in the neighborhood of 50 per cent or more of any demands they choose to make? The B. of L. F. & E. general staff is meeting in New York this week in a truculent mood—an attitude which, as they doubtless remember, proved profitable to them back in December, 1941.

FREIGHT RATES & PRICES:

Freight rates represented only about 7½ per cent of the delivered cost of commodities in 1941. This is another way of saying that a 10 per cent increase in freight rates would cost the consumer less than 1 cent on a dollar's purchase—or a 10 per cent freight rate decrease would save him less than a cent per dollar spent. This ratio of freight rates to value does not, of course, hold true for all commodities. Rates are a big part (29 per cent) in the cost of mine products, but less than 5 per cent of the delivered price of manufactured goods. Details are given in an article elsewhere herein.

BIG POWER FOR DMIR:

The Duluth, Missabe & Iron Range has ten new 2-8-8-4's, described and illustrated herein. They haul 6000 gross tons (maximum adverse grade 0.62 per cent) without a water stop between terminals, and carry enough fuel for a round-trip.

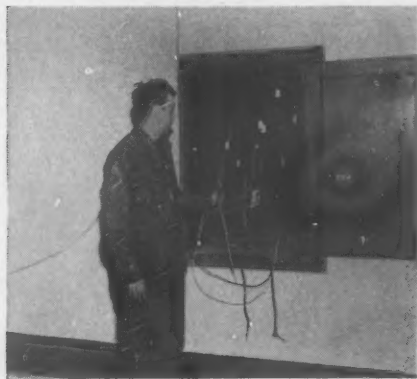
GOOD WIRING PAID



Twice!



• New and old junction boxes for the riser cables are side by side. "This building had an unusual first-class job of old-fashioned wiring and as a result we were able to use a good deal of it," said the electrical contractor.

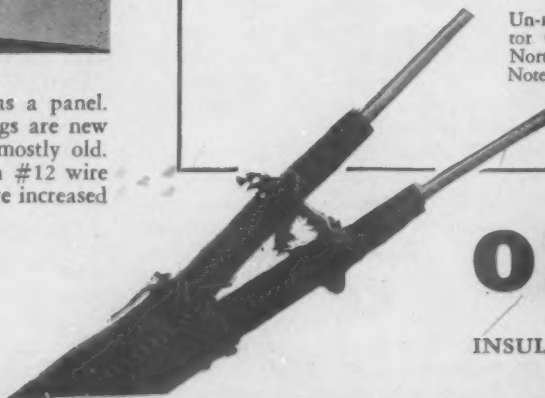


• Each end of each floor has a panel. Receptacles, switches and plugs are new but the lighting circuits are mostly old. (90% of the old circuits with #12 wire were reused.) The outlets were increased three for one.

IN 1907 the Chicago & Northwestern Railroad wired its then new office building in Chicago with Okonite cable. Recently the company modernized this building and the initial cable and its installation were so good that the original wire, after more than 35 years of service, was used again in all the circuits! An inspection of the original cable showed that the tinning on the conductors was very good, with no bare copper visible; the Okonite insulation was in excellent condition; the wire insulation was flexible and could be bent upon itself without cracking or injury and that the braids over the conductors, as well as the outside braid, were strong and well saturated.

The Chicago & Northwestern Railroad, in selecting a *good* wire 35 years ago, is now benefiting by using it again at a time when it also makes a valuable contribution to our country's war effort in the conservation of critical materials. Good wiring — Okonite wiring — pays! And in this instance it paid twice! . . . The Okonite Company, Passaic, New Jersey. Offices in principal cities.

Un-retouched cut-back section of #12 twin conductor Okonite wire removed from the Chicago & Northwestern office building after 35 years' use. Note its excellent condition.



OKONITE

INSULATED  WIRES & CABLES

RAILWAY AGE

Business Support for New Deal Policies

"Economic illiteracy" is one of the primary causes of the present war—so the British publicist, Norman Angell, told a large audience of business men at a meeting of the National Industrial Conference Board in New York last week. Making his indictment specific, he recalled the insistence by the British Parliament, following the previous war, that large reparations be collected from Germany, while at the same time Germany was denied the opportunity to increase her exports of goods. Such ignorant defiance by the victors in the last war of the elementary facts of international trade, he maintained, was one of the conditions which made internal conditions in Germany ripe for the emergence of Hitler.

Another speaker on the same program was Paul G. Hoffman, president of the Studebaker Corporation and chairman of the Committee for Economic Development. He told of the efforts of his committee to arouse private business to the desirability of preparing now for the transition from war to peace—lest there be a period of severe unemployment at that time which would tempt the government into further large expenditures, and consequent extension of socialism.

Thus the preaching of sound economic principles to and by business men proceeds with unprecedented vigor. The Chamber of Commerce of the United States, the National Association of Manufacturers and almost all other business organizations are either pursuing their own programs in this respect or, at least, are aiding the further dissemination of the educational programs of national industrial organizations.

It would be heartening if it could be reported that *practices* of business people in determining specific policies of their own businesses were being modified to conform to the principles they are so eloquently expounding. Unfortunately, little or no progress in that respect is to be observed.

For example, earlier in the day at the Conference Board meeting referred to above, George Romney, managing director of the Automobile Council for War Production, spoke on the post-war prospects of the automotive industry. These, it seems, are very bright indeed—not, however, because of any special effort or genius that the industry expects to display, but because it is looking to the federal and local governments to embark on a *colossal program of highway modernization, especially in and around the cities, to supply the industry with an enlarged market.*

The automotive industry, therefore, insofar as Mr. Romney is its spokesman, is looking for its post-war prosperity to stem, not from its own efforts, but from an extension of socialism in transportation. It is difficult to see wherein the program Mr. Romney advocates differs in any essential particular from those of the National Resources Planning Board and other New Deal agencies.

Nor would it be fair to the automotive industry to single it out as the only one which, while preaching free enterprise, persists in practicing socialism. Important segments of the construction industry, with an eye to large government contracts, and of the oil industry (with its barges on toll-free waterways)—and many other large corporate shippers—are not friends of free enterprise as far as transportation is concerned. Yet, if free self-supporting enterprise is not a valid principle for transportation, how can it be consistently or successfully defended in manufacturing or any other industry?

Efficiency
FOR VICTORY

Wages and Dividends

The government's current railway policies negative its ostensible policies both of preventing inflation during the war and of helping provide full employment after the war.

First, the Office of Price Administration recently got the Interstate Commerce Commission to order a reduction of \$300 million a year in freight rates upon the ground that this would tend to hinder inflation. But it will not have this tendency. By curtailing by about \$150 million a year the railway taxes the government otherwise would have got, it will necessitate others paying that much more taxes. It will deprive the railways of about \$150 million net income they otherwise would have got; but the railways promised that if the rates were not reduced they would not use this money to increase dividends and thereby increase the purchasing power of their stockholders during the war. By depriving the railways of it, the government has made it impossible for them to put it aside and use it in providing employment after the war.

Second, a government board has recommended advances in wages to railway non-operating employees which will cost over \$200 million a year. Whatever their justification for removing inequities, these advances will increase the purchasing power of railway employees during the war, and, therefore, plainly have an inflationary tendency. Furthermore, unless the railways continue to have record traffic and gross earnings, the higher wages will tend to curtail the employment they can provide in the post-war period.

In the rate case the Commission secured commitments from the railways that, if rates were not reduced, "surplus" earnings made during the war would not be paid out in dividends but used to reduce debt or retained for future expenditures on railway properties. On the other hand, in the report of the board that recommended advances in wages, much was said about wages held to have been in the past or at present too low, but nothing whatever about the effects on railway credit and stockholders of the terrific reductions of railway net income and dividends suffered since 1930.

In the eleven years ending with 1930 the payroll of the Class I railways averaged \$2,901 million annually, and in the eleven years ending with 1941 only \$1,810 million, a decline of 37.6 per cent. In the former period railway dividends averaged \$366 million annually, and in the latter period only \$152 million, a decline of 58½ per cent. Furthermore, largely because of advances in wages made in 1937 and 1941, the railway payroll of \$2,932 million in 1942 slightly exceeded the average of 1920-1930, and exceeded by 62 per cent the average of 1931-1941. On the other hand, dividend payments of \$196 million in 1942 were 46½ per cent less than they averaged in 1920-1930, and only 29 per cent more than they averaged in 1931-1941.

In spite of the reductions of rates and advances of wages, the railways, while they have the record war

traffic, probably will continue to make record, or almost record, net income. If there is justification for making advances during the war in the present highest wages in history, in spite of their obviously inflationary tendency, is there not even more justification for increasing the small total amount of dividends now being paid? The most important problem of the railway industry is that of restoring its credit sufficiently to enable it after the war to raise capital for rehabilitation and improvements by *selling stock*. Upon the solution of that problem will largely depend its ability to provide employment. It cannot market stock upon which small or no dividends are paid. And, after all, the railways do belong to their stockholders. Why, then, should stockholders be denied dividends that are earned—especially if their payment will help restore credit that in the post-war period will be vitally needed?

It is highly significant that most current thinking considers it justifiable to use increased earnings to pay increased wages, but not to pay dividends. Private enterprise cannot survive and function any better without satisfied owners than without satisfied employees. And without satisfied private owners, government will have to do the employing.

War-Time Research

It is everywhere observable that the war has stimulated technological development—especially that benefiting railroads' competitors—to a degree equivalent to decades of normal peace-time progress.

These improvements are not yet entirely disclosed, for reasons of military secrecy, and will not be fully available commercially until after the war, but industrial leaders are aware of them and are preparing to introduce them to peace-time use. Many of these innovations bear *directly* on improved efficiency in transportation agencies competitive with the railroads. To be similarly useful to the railroads, they will have to be *adapted*—and this will require ingenuity and application by the railroads to a degree not required of their competitors. It is fortunate, therefore, that the railroad industry is now more alert than it ever has been before to the competitive necessity of engaging in research to keep the industry in the vanguard of technological progress.

Even though the railroads as a whole, however, are much more attentive to research to the end of improving and reducing costs of their product than they have been in the past, this is not equally true of all roads or of all departments of individual roads. There is a traditional tendency on the part of many to make changes reluctantly and to adopt them only after they have been proved by extensive service on other roads. While service records are important and are "the proof of the pudding," the tempo of technological development is so rapid today that those railways which wait for years of conclusive evidence of the practicability of new de-

velopments may find themselves lagging far behind in the competitive race.

Some of the developments issuing from the war will have "service records" of their own, made under grueling combat conditions—conditions in many instances more severe than would be required in railroad service. In such instances it may reasonably be asked why it should be necessary to conduct further exhaustive trials and service tests on the railroads before taking advantage of them.

An interesting recent development is the making of precision machine parts from metallic powder and the development of self-lubricating bearings by this process which are now being used on tanks and gun mounts. The metallic powder is first subjected to pressure in a mold and then baked in a furnace at a temperature below the over-all melting point. By adding some volatile material to the powder, a bearing may be made which is porous and has the property of soaking up oil like a sponge. Such bearings are said to lubricate satisfactorily in extreme cold and not to bleed oil when hot, under pressure; when more lubrication is needed, they exude more oil.

This is only one example of the possibilities that lie ahead. Hundreds of developments in metallurgy, electronics, plastics, etc., will be available after the war. If the railways are to keep pace with the toughest competition they have ever faced, they will need to apply all the ingenuity, observation and imagination they possess—not overlooking developments in related fields.

Why Wear Out Trucks In Unnecessary Long Hauls?

It is to the national interest—as well as that of the shipping community and the railroads—that *truck transportation be preserved* for those transportation tasks which trucks alone can do efficiently, or do at all.

At the present time—despite the great limitation on the supply of truck transportation arising from the scarcity of tires and gasoline, as well as of the vehicles themselves—the use of trucks for long-haul transportation persists in large volume. The Office of Defense Transportation has from time to time been reported as about ready to prohibit trucks from most long-haul service, where railroads are prepared to afford an adequate substitute, but nothing has come of such rumors.

Meantime many trucks continue to wear out their tires and burn gasoline in providing long-haul service, for which trucks are, in most cases, a convenience rather than a necessity. Thereby, the future supply of trucks and tires for service in which the truck is indispensable is being jeopardized.

Along the Eastern seaboard, truck service for local deliveries has already been severely curtailed, to the great economic loss of thousands of business men and the inconvenience of the consuming public. Under such

circumstances, is it not a strange anomaly to see long-haul trucks continuing to handle traffic for which the railroads have ample facilities? The convenience, and possibly some monetary savings, of some long-haul shippers and receivers of freight is given precedence over the very existence of retail businesses which, when its truck delivery service is taken away, has no alternative form of transportation to fall back upon.

The railroads have, as a war measure for the conservation of transportation, been positively prohibited, without special permission, from engaging in short-haul transportation—which is a just ruling, because railroads cannot, in most cases, serve such traffic as efficiently as trucks. But no companion prohibition has issued, denying trucks the long hauls, where railroads can do the job more economically than trucks can. Truck hauling persists over these longer distances, not for reasons of true economy, but because of adherence to a competitive rate structure which does not take into account the comparative economy of the two methods of transportation. This rate structure makes these long hauls lucrative to the truck operators and, not unnaturally, they are loath to forego them. Meantime changing the rate structure is such a complex process that hardly anybody among the parties at interest wishes to take on such a chore in war time.

A well-informed shipper, familiar with both rail and truck transportation, gives us the following facts on rail and truck equipment economy for typical hauls of 1000 miles and 150 miles:

On the 1000-mile haul, a truck will make a round-trip in 7 days; on the 150-mile haul it will make a round-trip in 1 day. With 10-ton capacity and a 75 per cent load factor, the 1000-mile truck will transport 15 tons to destination in a week and, on the 150-mile haul, 105 tons.

On the 1000-mile haul, a box car will require two weeks for the round-trip, and 8 days for the 150-mile round-trip. With a 30-ton average and a 75-percent load factor, the box car will haul 50 per cent more in a given period of time than a 10-ton truck on the 1000-mile haul—but it will provide service to destination on the shorter haul for only one-third as much as the truck.

The railroads do not covet the long-haul traffic being hauled by trucks. Under present conditions, they would prefer to have the trucks continue handling it. On the other hand, neither the railroads nor the shippers nor the nation can afford to look forward to a period when the railroads may be forced to re-enter short-haul transportation, because there are no trucks available to provide it. If forced to take over a large volume of such short-haul movement, the effect would constitute a serious drain on their equipment supply and their over-all efficiency.

If, as appears unavoidable, the railroads are going to be called upon to take over a considerable volume of freight now moving by highway, it is common sense that they assume, first, that part of the job which they can do well—rather than, by persistent refusal of the authorities to face the facts, finally have turned over to the railroads a large volume of short-haul business which they can move with minimum efficiency if at all.



Tower WB and the View of the Operators of the New Westbound Hump

Yard Control Towers Have New Features

WHEN the Chicago, Burlington & Quincy built the two switch and car retarder control towers at the new westbound classification yard which it completed recently at Galesburg, Ill., it incorporated a number of features frequently given little consideration in the past—including fire-resistant construction, wide unobstructed vision for operators, heavily overhanging roof eaves and heat-absorbing glare-reducing window glass, inside modern sanitary facilities and thermal insulation of the roof structure.* In addition, the new towers at Galesburg are neat in appearance and otherwise modern in every respect. Of interest, too, they were made to incorporate all of these features while employing a minimum of critical materials, taking advantage of available second-hand or refabricated materials wherever possible.

Brick and Concrete Construction

The new towers, known as WA and WB, lie near the head end of the new classification yard, WA being located on the east side, where it controls 6 retarder units and 3 power switches, and WB being located on the west side, where it normally controls 11 retarder units and 35 power switches, but which, through the installation of duplicate equipment, can be made to control all of the retarders and all of the power-operated switches in the

Two new structures on Burlington give special consideration to the working conditions for operators

yard layout. Both towers have two floors, are of essentially the same type of construction, and both are of the same height, about 20 ft. to the eave line. Tower WA is 14 ft. 6 in. by 13 ft. 6 in. in area, while Tower WB, containing more control equipment, is 16 ft. 8 in. by 16 ft. The former tower, located on a shallow fill, has concrete foundation walls that extend down well into the original grade. Tower WB, on the other hand, located on a 13-ft. fill, is supported on a treated pile foundation, including a total of 12 piles, each 25 ft. long. The piles are cut off at a level about 4 ft. below final grade and are capped with a continuous concrete footing wall.

The exterior walls of both towers are of common brick, faced with Continental red face brick, and are capped at the second floor window level by a stone sill. The floor at the lower level in both structures is a 5-in. concrete slab, laid on a sand cushion and reinforced with both rods and mesh. The second floor, on the other hand, is of concrete beam and slab construction, 4 in. thick, with rod reinforcing. All of the rod reinforcing used came

* A general description of the new westbound classification facilities at Galesburg appeared in the *Railway Age* for March 6.

from dismantled freight cars and was on hand at the road's reclamation plant at Eola, Ill. Another feature of the second floor is that it has a red, dust-proof finish, obtained through an integral color treatment of the top one-half inch of its wearing surface.

Window and Roof Features

The second story of each tower is an unobstructed room, with a plaster ceiling 7½ ft. high, and plaster walls on the rear and rear half of each adjoining side. The ceiling of the room is insulated with 4 in. of rock wool.

The front of the room area and the front halves of the adjoining sides, above a sill 2½ ft. above the floor level, are enclosed with steel sash, glazed with ¼ in. heat-absorbing glass, a glass with a distinctive blue tinge, which not only absorbs a large percentage of the infrared rays of the sun, but which also softens the intensity of otherwise unobstructed white light.

The sash employed, which was designed by the engineering department and fabricated by the shop forces of the road from available second-hand structural steel, has muntins that are only 2¼ in. wide, and corner posts that are only 1¼ in. wide on a side, presenting minimum obstruction to view. The glass arrangement involves

fixed panes 36½ in. long by 30 in. high, which are surmounted by top-hung ventilating sections, 18 in. deep. This arrangement not only permits adequate ventilation when desired, but also the washing of all outside window surfaces while working from the inside.

The roofs of both towers are of frame construction, with timber rafters covered with 1-in. dressed and matched sheathing, and are weather-proofed with 12-in. asphalt strip shingles. The outstanding feature of the roof construction is the 4-ft. overhang of its eaves on all sides, to the level of the top of the fixed sash, 5 ft. above the second floor level.

Through this feature of design, the room is shaded from direct sun rays and sky light, which, in combination with the heat-absorbing blue glass of the windows, brings about a condition that is most restful on the eyes of the tower operators.

Amber-Colored Desk Spot Lights

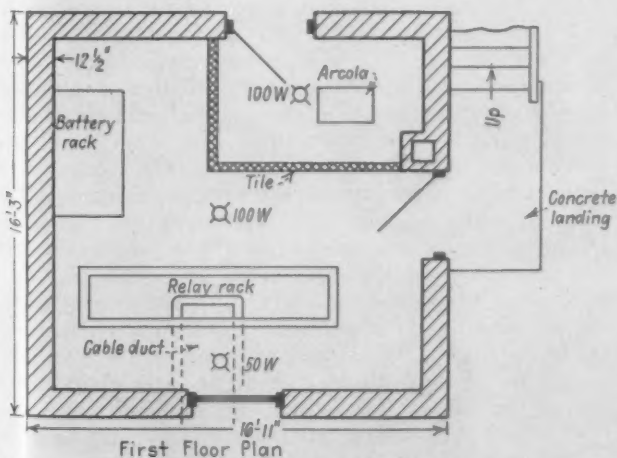
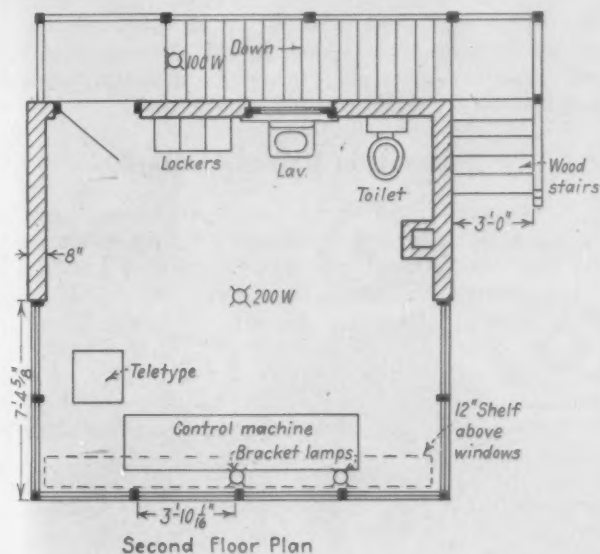
For night illumination, when desired, the second floor area in each tower is equipped with a 200-watt lamp mounted in a ceiling-hung, indirect-type lighting fixture. For direct illumination on the desk tops of the operators, one or two ceiling-hung spot lights are employed (one in WA and two in WB), which cast a direct beam of light on the immediate working area. These lights, which are similar to automobile fog lights, have amber-colored lenses to minimize glare; are mounted on adjustable brackets so that they can be directed to the particular area being used by the operators; are equipped with 21-candlepower bulbs; and are rheostat-controlled from the desk level, so that the operators on the different shifts can adjust the light intensity to that which is most restful to their eyes. Power for the lamps is taken from the 12-volt storage battery supply of the control machines housed on the first floor of the tower. Through this arrangement, any failure of outside commercial power will not require the operators to carry on their work in darkness or by the aid of emergency lights.

Sanitary facilities in each tower include a toilet and a lavatory located on the second floor, which are piped with running water and drained into a septic tank buried outside. Heating of each tower is by means of a hot water system, equipped with an Arcola coal-fired heater located on the first floor. To promote cleanliness and to protect the relay and battery areas of the first floor from dust, the heater area is completely enclosed by 4-in. tile partition walls and has a separate entrance from the outside of the tower. Stairs to the second floor are on the exterior of the towers and are of frame construction, steel being unavailable for this purpose. All doors on both the first and second floors are also of wood.

The retarder and switch control machines in both towers are located centrally along the front of the second floor area, where the operator or operators have a view through more than 180 deg., unobstructed except by the narrow window muntins.

A teletype transmitter, delivering switching lists covering the trains to be humped, is located to the right of the control machines, while the toilet and lavatory, and a group of steel lockers, are located along the rear and brick portions of the side walls.

The new towers were designed and built under the general direction of F. T. Darrow, chief engineer of the Burlington until his retirement on January 1, and under the immediate direction of H. G. Dalton, structural engineer. Actual construction of the towers was done under contract by G. A. Johnson & Son, Chicago.



First and Second Floor Plans of Tower WB

The Material Situation and Its Effect on Freight Cars*

War Production Board problems and methods explained and more patching of equipment forecast at St. Louis meeting

By D. W. Odiorne

Chief, Rolling Stock Section,
Transportation Equipment Division, W. P. B.



D. W. Odiorne

THE Transportation Equipment Division is one of the industry divisions of the War Production Board. As such, its duties and responsibilities primarily concern the programming of production of new equipment and parts, the distribution of the materials both for new production and for maintenance requirements, and the development of production and material resources. The Division administers the following limitation and preference orders: L-88, covering the disposition of used rail and used rail joints; L-97, covering the production of new locomotives; L-97-a and L-97-b, covering the production of new railroad type cars; L-101, covering the production of passenger carrying transit vehicles; and P-142, covering maintenance, repair and operating materials of transportation systems. It acts as consultant for the railroad industry on all general WPB orders and regulations. The Division is subdivided into four operating sections for readily administering the limitation orders and associated regulations. The four sections are the Motive Power Section, Rolling Stock Section, Way and Structures Section and the Bus and Electric Railways Section.

Centralized Group to Distribute Critical Materials

A centralized group known as the War Production Board Requirements Committee has been established to distribute the critical materials available in this country. The needs for various industries are handled by their respective claimant agencies. These agencies may be either within or without the War Production Board, but each agency has a representative on the Requirements Committee. There are now 15 claimant agencies—the Aircraft Resources Control Office, War Department, Navy Department, Maritime Commission, Office of Lend-Lease Administration, Board of Economic Warfare, Canadian Division, Office of Civilian Requirements, Facilities Bureau, Agriculture, Petroleum Administrator for War, Office of Rubber Director, Office of Defense Transportation, Office of War Utilities and the National Housing Agency.

* From a paper presented before the Car Department Association of St. Louis, May 18.

These claimant agencies act as spokesmen for various "customers" using critical material. They are responsible for making up and presenting their respective programs and compiling requirements of materials to meet them. Each claimant acts as proponent of its own programs and carefully examines the programs of others. After full discussions of the programs and the requests of the respective claimant agencies, the chairman of the Requirements Committee, with the advice of the committee, makes allotments of materials to meet definite approved programs. If adjustments in individual programs are necessary as a result of the final allotments, the claimant is responsible for making them.

Claimants of Railway Materials

At the present time, the only claimant agents concerned with railroad car production or maintenance are the Board of Economic Warfare, Office of Lend-Lease Administration, Canadian Division, Office of Civilian Requirements, Facilities Bureau, Aircraft Resources Control Office, Navy Department, War Department and the Office of Defense Transportation. Each of these claimants has separate and distinct requirements for railroad equipment. The Board of Economic Warfare handles export requirements other than Canadian or Lend-Lease; the Facilities Bureau handles plant expansion requirements for steel, aluminum and magnesium plants, etc.; the Office of Civilian Requirements handles requirements for maintaining existing plants; the service agencies handle requirements for ordnance plants, shipyards, docks, theaters of operation, etc.; and the Office of Defense Transportation is the claimant agent for domestic railroads and, as such, presents their requirements. These estimated requirements are developed by the Office of Defense Transportation in conjunction with the Transportation Equipment Division.

After the over-all allotments have been made by the Requirements Committee to the various claimant agents, they, in turn, acquaint the Transportation Equipment Division with the amounts of materials available for their various transportation equipment programs and each program is adjusted accordingly. For some of the claimant agencies the Transportation Equipment Division actually distributes the allotted materials to the individual companies. The Office of Defense Transportation is one of the agencies for which the Division makes this distribution, so the domestic railroads and the builders of locomotives, cars, etc., for domestic use receive their material allotments from the Division. In addition to



distributing the materials allotted to it by various claimant agencies, the Transportation Equipment Division reviews all specifications and designs for proposed new equipment with the view of conserving materials and improving production by standardizing designs. The division also reviews programs of heavy repairs to cars and locomotives to ascertain that minimum amounts of materials are being used. The division is also busy expediting materials for new production and maintenance programs as incipient bottle-necks develop. The programming of the production of new equipment is of extreme importance and is very actively followed until each piece of equipment is delivered.

Some two years ago, before material shortages became anywhere near as acute as they are today, a preference rating system was developed to enable the most deserving consumers to obtain materials before secondary needs were filled. This system was merely an assignment of ratings, either individual or blanket, with the more important items getting the higher ratings. The highest rating was called A-1-a. Then, in order, they went down the A-1 series to A-1-k, then A-2, and so on to A-10, and then came the B series. There may even have been a C series planned, but I don't believe it ever came into use. Various industries and products were assigned blanket ratings. Railroad locomotives and freight cars were assigned a blanket A-3 rating and passenger cars an A-10 rating. If an applicant did not possess a blanket rating or found it necessary to request a higher rating on a particular item, he would apply on a PD-1 form. As the material situation grew tighter, it was necessary to improve ratings in attempts to obtain material. Finally, it developed that the once all powerful A-1-a, which had been intended for military use, was being too widely used, so the AA series was superimposed on the older ratings. Later on, an AAA rating was established, this rate being reserved for emergency purposes.

Trends in Priorities

In the meantime, it had become apparent that the material situation was so acute that a simple preference rating system would not suffice. Therefore, during the second and third quarters of 1943, the Production Requirements Plan, or PRP plan, was established. The basis of this plan was a horizontal assignment of preference ratings for definite quantities of materials which would be put into production by manufacturers in producing their various end products. This plan included an inventory control feature and materials were to be obtained with the preference rating and in the quantities authorized on each PRP certificate. These certificates were issued for three-month periods and were to cover all materials allowed each manufacturer for his total production for each three months.

Just prior to the issuance of the PRP plan, a preference rating order, number P-88, was issued to cover the materials required for maintenance and repair for the railroads. This order called for reporting each quarter on Form PD-351 the amounts of certain materials and fabricated items required by each railroad during the designated three-month period. Form PD-351 was similar to the PRP certificate form, and it also contained an inventory report. The items reported on this form were chiefly critical raw materials and fabricated parts. Preference ratings were granted for definite amounts of these raw materials. For fabricated items not specifically reported, a blanket preference rating lower than that authorized for the critical items was granted in unlimited amounts to the railroads. The control on these fabricated items

was the issuance of limited amounts of materials on PD-25A certificates to the manufacturers of such items. Eventually, it was found necessary to limit the railroads to definite money value authorizations for these fabricated items so as to make the distribution between the railroads more equitable.

The Controlled Materials Plan

It developed under the PRP system that many materials entering into the production of an end product would be obtained, but certain items would not be obtained. This caused the tying up of much materials in the producer's hands, awaiting some one or two items required to complete a product. A new system was therefore developed to overcome this difficulty and to establish a balance among the various materials required for any end product. This is the Controlled Materials Plan or CMP. The basis of this plan is a vertical allotment of all the materials required to produce any end product. The plan was only started as of April 1 for the current quarter and will not be in full effect until the third quarter. The period in the meantime is a transition period and such a period is always a troublesome one. However, we are becoming familiar with the unexpected difficulties and learning how to overcome them, and it is expected the plan will be working much more effectively by the third quarter. As the requirements and distributions are now based on three-month periods, there are four distributions each year. A definite timetable has been established for accumulating and presenting the requirements for each quarter and also for making the distribution and allotments.

It is obviously impractical to attempt to control the allotment of each and every kind of material. Furthermore, it is believed that if certain of the more critical and widely used materials are controlled, all other materials will be more or less automatically regulated, as their requirements will have quite definite relations to the amounts of the critical items. The materials under direct allotment at this time are aluminum, copper and copper-base alloy, and steel, both carbon and alloy. They are called controlled materials.

For the purpose of convenience in the operation of this plan, all manufactured products containing any controlled materials are divided into two general classes, A and B. Class A products are all products other than Class B products. In general, Class B products are shelf items, that is, items which are not custom built. They are items normally sold on the open market. Other Class B products are those sub-assemblies or miscellaneous or specialized items of equipment for which individual specific allotments from claimant agencies to prime consumers and from prime consumers to secondary consumers are considered impractical. Examples of B products are nuts and bolts, furniture, hardware, roller-bearings, draft gears and car seals. A complete list of Class B products is contained in CMP bulletins.

Materials for Freight Cars

In the production of an item such as a freight car (an A product), it is necessary for the car builder to submit an application to the proper claimant agency covering all the controlled materials required in the car or cars he proposes to build, except such controlled materials as are included in the Class B products incorporated in the car or cars. If the application is approved and the cars are scheduled for production, the car builder receives an allotment number for the proper amounts of controlled

materials and a preference rating for the Class B products required. In the meantime, the manufacturers of the B products have filed applications for the controlled materials required for those products. These applications are not filed with any claimant agent but with the industry divisions of the War Production Board assigned to handle the respective products. When the car builder and the B product manufacturers receive their allotments, they extend them to secondary consumers or to the mill as the case requires. Eventually, all allotment numbers reach the mill level and the raw materials are supplied on these authorizations. When the Requirements Committee distributes the allotments of controlled materials to the various claimant agencies, the sum total of each material so distributed is in close balance with the available supply of such material, regardless of the amounts requested.

Change to CMP Comparatively Simple

The operation of CMP for maintenance, repair and operating supplies (called MRO) is somewhat different than it is for new production. The railroad industry is one of the few where the ratio of MRO materials to production materials is very high. However, twelve months of operation under Order P-88 found the railroads and the Transportation Equipment Division in a position where a change to CMP was comparatively simple.

With the advent of the CMP plan, it was found desirable to replace Preference Rating Order P-88 with the new Preference Rating Order P-142. This order was issued on April 5, 1943, and became effective at once. The reporting form for use with this order is called PD-844. The railroads are just completing filing these forms with the Transportation Equipment Division for materials required from July 1 to September 30. There are several innovations in this form designed to indicate clearly the use to which the materials are to be put and thus enable the Division analysts to detect more clearly the most essential requirements. I believe it will be found that the preparation of this form is simpler than the preparation of Form PD-351 and will be less of a burden for the railroads.

As a result of the increasing demand for products by both the military and civilian consumers during the early months of 1942, it was found necessary to control the production of many end products, including railroad locomotives and cars, so that both demands could be met in orderly fashion. Accordingly, on April 4, 1942, General Limitation Orders L-97 and L-97-a were issued—L-97 scheduling the production of locomotives, and L-97-a scheduling the production of railroad cars. Subsequently, Order L-97-b, scheduling production of railroad type cars used in industrial plants, was also issued.

At the time Limitation Order L-97-a was issued, the car builders were producing cars in the so-called SPAB program, that is, the Supply Priorities Allocation Board program established January 1, 1942. This program was for approximately 36,000 freight cars to be produced during the months of February, March and April of 1942. Shortly after the limitation order was issued, the Requirements Committee determined that an additional 18,000 freight cars were all that materials could be made available for the remainder of the year 1942. The Requirements Committee further determined that these 18,000 cars should be built, insofar as possible, of materials then in inventories and also, insofar as possible, of composite wood and steel construction. It developed that the car builders had on their books orders for far more

than 18,000 cars and had accumulated considerable material for many of them.

The Office of Defense Transportation recommended that the 18,000 cars should be of open-top type, except for a few tank and special service cars. Unfortunately, many orders then on the car builders' books were for box cars and, therefore, much of the material in inventories was box car material. With the assistance of engineers of the American Railway Car Institute and the Association of American Railroads, the Transportation Equipment Division developed designs for the use of a great deal of the box car material in building open-top cars. These cars were not entirely of standard open car dimensions but, considering the conditions, they were of a quite satisfactory design.

As most of the usable box car material was thus disposed of, the Transportation Equipment Division then undertook to develop designs for composite type cars of all new material without consideration of the box car material surpluses. These designs were to be for future freight car building programs. There were seven standard designs developed and these designs were issued in September, 1942. These seven designs included a 50 and a 70-ton tight bottom and a 50-ton drop bottom gondola, a 50 and a 70-ton hopper car, and a 50 and a 70-ton flat car. There will be issued very soon two modifications of the 50-ton tight bottom gondola, one incorporating six drop doors and the other eight drop doors. There are also about to be issued two designs of 50-ton composite box cars, one 40 ft. 6 in. long and the other 50 ft. 6 in. long. Some few months before this a new light weight design of tank car for carrying petroleum products had been accepted. This design incorporated narrower and thinner plate than the standard ICC Class 103 tank car.

Equipment Programs

In November, 1942, the Requirements Committee determined that the new car production of the first six months of 1943 should be limited to 20,000 cars. Again, the Office of Defense Transportation recommended that these should be all of open-top design with the exception of a few tank and other special cars. This program was delayed because of insufficient orders on the car builders' order books for the recommended open-top cars and the actual delivery of cars on this program did not commence until April, before which time it had become apparent that it would be impossible to finish the entire 20,000 cars by June 30. When the Requirements Committee was considering the distribution of materials for the second quarter of 1943, it took under advisement the need for additional materials in that quarter for the production of cars over and above 20,000 during the third quarter of the year. However, the committee determined that no material should be made available in the second quarter for such purposes.

Considerations for requirements for the third quarter have recently been completed. The total requirements for steel presented by all claimant agencies totalled, I understand, somewhat more than 20,000,000 tons, whereas the maximum possible supply during that quarter will probably be slightly under 15,000,000 tons. It was immediately seen that cuts would have to be made in some of the proposed programs. The allotment to ODT for all transportation requirements coming within the jurisdiction of that agency was approximately 1,200,000 tons of carbon steel. The division of this allotment has just

(Continued on page 1142)



D. M. & I. R. Freight Power

Articulated 2-8-8-4 units, with 140,000-lb. tractive force, designed to haul 6,000-ton trains without fuel or water stops

THE Baldwin Locomotive Works, in March of this year, completed an order of 10 articulated 2-8-8-4 type freight locomotives for service on the Duluth, Missabe & Iron Range which rank among the largest built for service in this country. They have a tractive force of 140,000 lb., a weight on drivers of 695,000 lb. and a total engine and tender weight of 1,132,000 lb. The total wheel-base of engine and tender is 113 ft. 4 $\frac{3}{8}$ in.

These locomotives, which bear the road numbers 228 to 237, are practically identical in design to an original order of eight, from the plant of the same builder, which were delivered in 1941. These 18 locomotives handle ore trains of 6,000 gross tons from the Vermilion and Mesabi Ranges in Minnesota to the docks at Duluth. The round trip runs require 12 and 10 hours, respectively. The 25,000 gallon tender tanks permit through one-way runs without water stops and the 26 tons of fuel is sufficient for a round trip. On the trip from mines to docks there are numerous adverse grades, the heaviest against load being 0.62 per cent for a distance of three miles. These new locomotives are capable of handling a 25 per cent increase in tonnage as compared with the converted Mallet compound power previously used in this service.

The boiler is the straight-top type, 58 ft. 7 $\frac{1}{2}$ in. over-

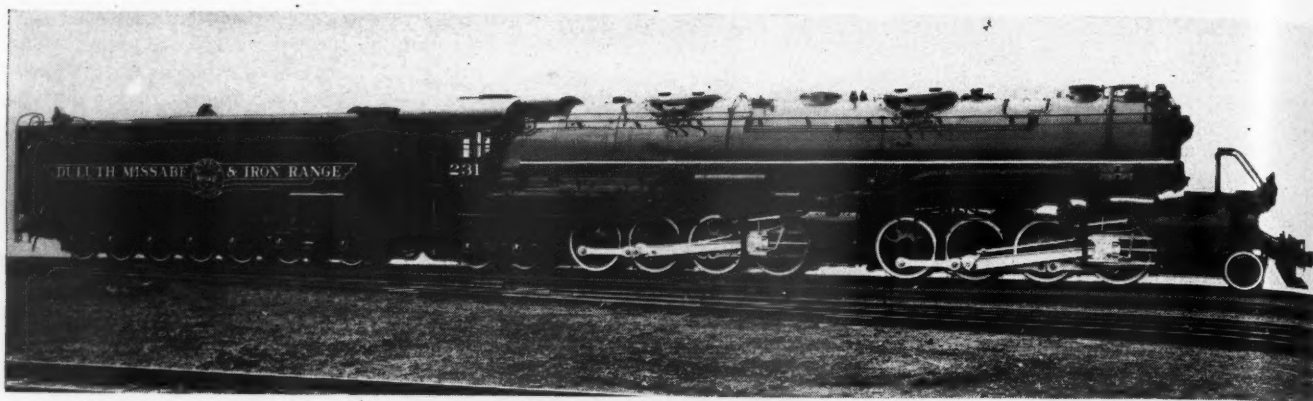
all length. The barrel is constructed in three courses with sheet thicknesses of 1 $\frac{5}{32}$ in. and 1 $\frac{3}{16}$ in. The first course is 104 in. outside diameter. The front and back flue sheets are $\frac{3}{4}$ in. and $\frac{5}{8}$ in., respectively. The circumferential seams are triple riveted while the longitudinal seams are quintuple-piveted butt joints. Carbon-steel sheets are used throughout the barrel and firebox.

The firebox is 210 $\frac{1}{8}$ in. long and 102 $\frac{1}{4}$ in. wide with an 84-in. combustion chamber. The firebox and combustion chamber seams are all welded. The crown is designed with slope for 2.2 per cent grades.

There is a full installation of Flannery flexible stay-bolts in the combustion chamber, throat sheet, breaking zones of the side sheets and in the boundary rows of the back head. Flannery rigid bolts are used in the water spaces.

Four syphons are used in the firebox and combustion chamber; one is located at the forward end of the firebox and one in the combustion chamber on the approximate center line of the boiler, while the remaining two at the rear of the firebox are about 14 in. right and left of the center line. The two rear syphons have their necks in the throat sheet and the other two at the approximate bottom center line of the combustion chamber. There are also two arch tubes and a Gaines wall in the firebox.

The superheater is a 124-unit Type E with American



TOP—The Total Wheel Base of the D. M. & I. R. 2-8-8-4 Locomotive Is 113 Ft. 4 $\frac{3}{8}$ In.; BOTTOM—One of the Boilers in the Shop During Construction

multiple throttle in the header. Five of the locomotives are equipped with Worthington 6 $\frac{1}{2}$ SA feedwater heaters of 14,400 gal. capacity; the other five are equipped with Elesco K 60 A heaters of 12,000 gal. capacity. All 10 locomotives have Sellers Type SY injectors of 12,000 gal. capacity, located on the left side.

Fuel is fed to the firebox by means of a Standard MB stoker. The grates are the Firebar type and the firedoor is the Franklin 8-A, with a 16-in. by 20-in. opening. The boilers are equipped with the Barco Type F3A low water alarm, Wilson blow-off cocks, mufflers and operating valves.

Engine Beds and Running Gear

The beds for the front and rear engine units, supplied by the General Steel Castings Corporation, embrace such parts as the cylinders, front bumper, cab support, brake-cylinder brackets, reverse-shaft support, articulation hinge, cradle and trailer rocker plates. The front and rear engine units are connected at the rear cylinders by a conventional articulation hinge. A single boiler bearing of the sliding shoe type, with centering device, is

used for transferring the weight of the boiler to the front engine.

The leading engine truck is the General Steel Castings Commonwealth two-wheel type with inside roller bearings. This truck has a swing of 6 $\frac{1}{4}$ in. each side of the center line. The trailer truck, supplied by the same manufacturer, is the four-wheel type with outside bearings. It is designed to swing 7 $\frac{3}{4}$ in. each side of the center line at the rear truck axle. Both leading and trailer trucks have auxiliary bearings; these being of bronze on the leading truck and of cast iron lined with Satco metal on the trailer truck. An accompanying table shows the type, sizes and material of the wheels, tires and axles for both the engine and the tender.

The cylinders, four in number, are 26 in. bore by 32 in. stroke. They have Hunt Spiller bushings—the pistons, piston rings, valves, valve rings and valve-chamber bushings were supplied by the same manufacturer. The valves for both front and rear engines are 12 in. diameter with 8 in. travel on the front engine and 7 $\frac{3}{4}$ in. on the rear engine. The Baker valve gear is controlled by a 12-in. Baldwin power reverse gear equipped with Transportation Devices Corporation reverse-gear valve for automatic cut-off control. The crossheads are the alligator type, forged and flame trimmed, with Rogatchoff adjustable wedges and bronze shoes. The wrist pins are



General Dimensions and Weights of the Duluth, Missabe & Iron Range 2-8-8-4 Locomotives

Builder.....	Baldwin Locomotive Works
Type of locomotive.....	2-8-8-4
Road class.....	M-4
Road numbers.....	228-237
Date built.....	March, 1943
Service.....	Freight
Rated tractive force, engine, 85 per cent, lb.....	140,000
Rated tractive force, booster, lb.....	None
Weights in working order, lb.:	
On drivers.....	565,000
On front truck.....	41,350
On trailing truck.....	93,350
Total engine.....	699,700
Tender (fully loaded).....	438,300
Wheel bases, ft.-in.:	
Driving.....	45-7
Engine, total.....	67-2
Engine and tender, total.....	113-4 3/4
Driving wheels, diameter outside tires, in.....	63
Cylinders, number, diameter and stroke, in.....	(4)—26x32
Valve gear, type.....	Baker
Valves, piston type, size, in.....	12
Maximum travel, front engine, in.....	8
Maximum travel, rear engine, in.....	7 3/4
Boiler:	
Steam pressure, lb. per sq. in.....	240
Diameter, first ring, inside, in.....	101-1 1/2
Firebox length, in.....	210 3/4
Firebox width, in.....	102 1/4
Combustion chamber length, in.....	84
Arch tubes, number.....	(2)
Syphons, number.....	4
Tubes, number and diameter, in.....	82-2 1/4
Flues, number and diameter, in.....	245-3 3/4
Length over tube sheets, ft.-in.....	21-0
Fuel.....	Bituminous
Grate area, sq. ft.....	125
Heating surfaces, sq. ft.:	
Firebox.....	379
Combustion chamber.....	177
Arch tubes.....	32
Syphons.....	138
Firebox, total.....	726
Tubes.....	1,009
Flues.....	5,023
Evaporative, total.....	6,758
Superheater.....	2,770
Combined evap. and superheat.....	9,528
Tender:	
Style.....	Rectangular
Water capacity, U. S. gal.....	25,000
Fuel capacity, tons.....	26

driving wheel bearings are the split type. The Alco lateral motion device is used at the first, fourth and fifth drivers; 1 1/8 in. lateral is used at these locations and 3/8 in. lateral at all other wheels.

Franklin automatic compensators and snubbers are used on all drivers.

The weight of the reciprocating parts on one side of each engine unit is 2,382 lb. In the counterbalancing of these locomotives 46 per cent of the reciprocating weights are balanced—2,194 lb. on each side of the locomotive. There is an overbalance of 128 lb. at the main wheels and 323 at all other drivers. The unbalanced reciprocating weights are 3.67 per cent of the total weight of the locomotive in working order.

The spring rigging of these locomotives is of conventional design. On the front engine the spring rigging is continuous from the engine truck to the intermediate driver and is cross equalized. The main and rear drivers are equalized together on each side of the locomotive. On the rear engine the suspension is continuous on each side of the locomotive from the front driver to the rear trailer wheel. Coil buffer springs are used in the anchor hangers at the rear of the trailer truck. Case-hardened and ground bushings are used throughout the spring rigging; Fabreeka pads are used under the spring ends.

Lubrication

Mechanical lubricators, four in number, with 36 feeds are located on the front and rear units. The parts lubricated by oil under pressure are: cylinders, valves, stoker, guides, valve-stem guides, feedwater pump, frame and truck pedestals, steam- and exhaust-pipe joints, compensators, hinge pins, furnace bearers and sliding plates. Grease lubrication with Alemite fittings is used for such parts as crosshead pins, eccentric rods, reverse-lever guides, engine-truck center plate, side-rod knuckle pins, throttle rigging, valve-rod crossheads, lubricator rigging,

Axles, Bearings, Wheel Centers and Tires

Axles			Wheel Centers			Tires		
Location	Material	Manufacturer	Type	Material	Manufacturer	Diameter in.	Diameter in.	Manufacturer
Front truck....	Carbon steel	Carnegie-Illinois	A.S.F.	Multiple Wear	Wrought steel, heat treated	..	36	....
Drivers, main.:	Carbon steel	Carnegie-Illinois	Timken	Boxpok	Cast steel	56	63	Alco-Ry. Steel Spring Div.
Drivers, other..	Carbon steel	Carnegie-Illinois	Timken	Boxpok	Cast steel	56	63	Alco-Ry. Steel Spring Div.
Trailer, front....	Carbon steel	Carnegie-Illinois	A.S.F.	....	Cast steel	36	43	....
Trailer, rear....	Carbon steel	Carnegie-Illinois	A.S.F.	....	Cast steel	36	43	....
Tender trucks..	Carbon steel	Carnegie-Illinois	A.S.F.	Multiple wear	Wrought steel, heat-treated	..	42	....

Comparative Characteristics of Large Six- and Eight-Coupled Locomotives

	D.M.I. & R. 2-8-8-4	Northern Pacific 2-8-8-4	West. Pac. 2-8-8-2	Union Pac. 4-8-8-4	Nor. & West. 2-6-6-4	C. & O. 2-6-6-6
Road class.....	M-4	Z5	M137-151	.....	A	H 8
Road numbers.....	228-237	5000	251-260	4000-4019	1200-1224	1600-1609
Builder.....	Baldwin	Alco	Baldwin	Alco	Co. shops	Lima
Date built.....	1943	1928	1937	1941	1936,'37,'43	1941
Service.....	Freight	Freight	Freight	Freight	Pass. & Frt.	Freight
Weight on driver, lb.*.....	565,000	554,000	549,656	540,000	432,350	471,000
Total engine, lb.*.....	699,700	715,000	663,100	762,000	573,000	724,500
Tender, lb.*.....	438,300	41,000	403,350	435,800	378,600	426,100
Cylinder, diameter and stroke in.....	(4) 26x32	(4) 26x32	(4) 26x32	(4) 23 3/4 x 32	(4) 24x30	(4) 22 1/2 x 33
Diameter, driving wheels, in.....	63	63	63	68	70	67
Steam pressure, lb.....	240	250	235	300	300	260
Fuel.....	Bituminous	Sub-bituminous	Oil	Bituminous	Bituminous	Bituminous
Grate area, sq. ft.....	125	182.0	145.0	150.3	122	135.2s
Firebox heat. surf., total sq. ft.....	726	610	670	704	530	600
Evap. heat. surf., sq. ft.....	6,758	7,673	6,811	5,889	6,639	7,240
Super. surf., sq. ft.....	2,770	3,219	2,152	2,466	2,703	3,186
Tractive force, engine, lb.....	140,000	139,900	137,000	135,375	114,000	110,200
Tractive force, booster, lb.....	None	13,400	None	None	None	None
Fuel capacity, tons.....	26	27	6,000	28	26	25
Water capacity, gal.....	25,000	21,200	22,000	25,000	22,000	25,000

* Weights in working order.

crank pins, cushioning device, drawbar pins and tender vestibule.

The cab is the vestibule type of welded construction, completely insulated and weatherstripped. It is unusually roomy, being 130 in. wide and 112 in. long, at the deck. There are two seats on each side.

The locomotive brake equipment is Westinghouse No. 8ET with two 8½-in. cross-compound compressors located on brackets at the front of the smokebox. Four Wilson grid radiation elements are used for cooling. The driver brake is operated by 12-in. by 10-in. cylinders and has a braking ratio of 50 per cent at 50 lb. cylinder pressure.

Other equipment used on the locomotives includes TZ cylinder cocks and operating valves, Viloco cylinder by-pass valves, Locomotive Valve Pilot, A. S. F. type E 6-in. by 8-in. couplers with Simplex pockets, Miner A-78-XB draft gear, Franklin E-2 radial buffer, Pyle-National headlight and cab lamps, and Graham-White sanders, traps and operating valves.

The Tender

The tenders are the rectangular-U type with a fuel and water capacity of 26 tons and 25,000 gal. The under-frame and trucks were supplied by the General Steel Castings Corporation. The tender* is carried at the front by a four-wheel truck back of which are five pairs of wheels mounted in pedestals cast integral with the bed. The tender wheels, 42 in. diameter, operate in A. S. F. roller-bearing assemblies with auxiliary bearings.

The coal space is equipped with a Standard type DA coal pusher. Franklin flexible joints are used on the air-brake lines, and stoker and coal-pusher steam lines between engine and tender.

The tender draft gear is Miner A-78-XB and the couplers are A. S. F. Type E.

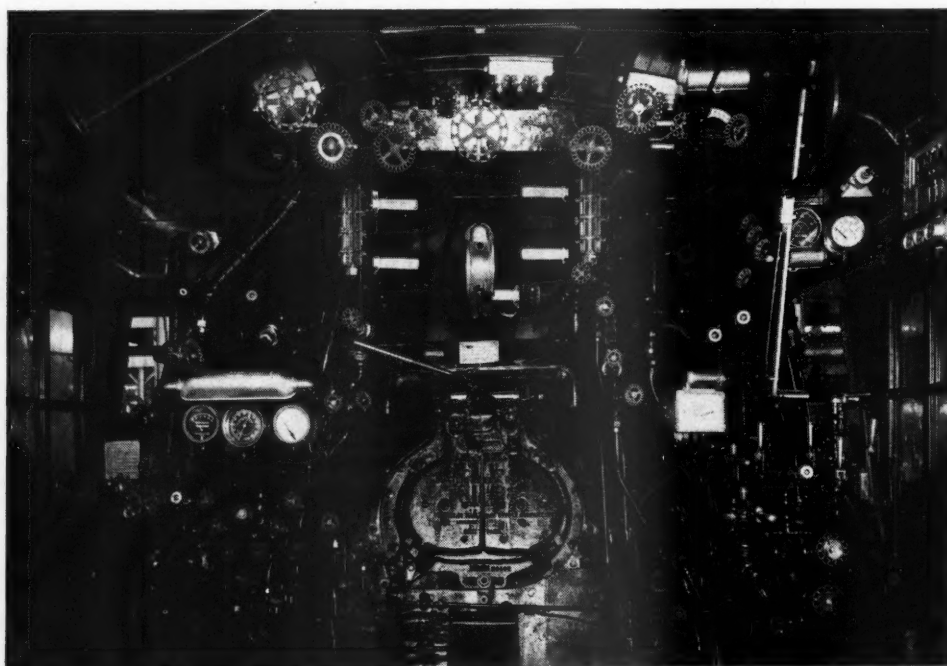
The tender trucks are equipped with A. S. F. clasp brakes designed for operation on 18-deg. curves, oper-

ated by 8-in. by 10-in. cylinders and having a braking ratio of 70 per cent at 50-lb. cylinder pressure.

Partial List of Material and Equipment on the Duluth, Missabe & Iron Range 2-8-8-4 Locomotives

Locomotive bed; engine and trailer-truck frame	General Steel Castings Corp., Eddystone, Pa.
Boiler and firebox steel; front bumper plate; tank plates	Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Grates	Waugh Equipment Co., New York
Fire brick	American Arch Co., Inc., New York
Washout plugs; boiler plugs; sand-box plugs	Huron Mfg. Co., Detroit, Mich.
Crown drop plugs	Nathan Manufacturing Co., New York
Boiler lagging; smokebox door gaskets; cylinder lagging	Johns-Manville Sales Corp., New York
Flue blower	Superior Railway Products Corp., Pittsburgh, Pa.
Staybolt iron	Ewald Iron Co., Louisville, Ky.
	Lockhart Iron & Steel Co., McKees Rocks, Pa.
	Ulster Iron Works, Dover, N. J.
Flexible staybolts	Flannery Bolt Co., Bridgeville, Pa.
Syphons	Locomotive Firebox Co., Chicago
Front-end throttle	American Throttle Co., New York
Throttle-valve-stem packing	The Garlock Packing Company, Palmyra, New York
Dry pipe; boiler tubes and flues; arch tubes	National Tube Co., Pittsburgh, Pa.
Superheater; pyrometer	The Superheater Company, New York
Injectors; injector steam valve; coal sprinkler	Wm. Sellers & Co., Inc., Philadelphia, Pa.
Injector check valve	Manning, Maxwell & Moore, Inc., Locomotive Equipment Division of, Bridgeport, Conn.
Low-water alarm; flexible joint in blow-off cock piping; drain valve; lubricator steam-heat joint	Barco Manufacturing Co., Chicago
Feedwater heater	(5) The Superheater Company, New York
	(5) Worthington Pump and Machinery Company, Harrison, N. J.
Stoker; coal pusher	Standard Stoker Co., Inc., New York
Blow-off cocks and mufflers; operating valves; radiator elements; air compressors	Wilson Engineering Corp., Chicago
Safety valves	Coale Muffler & Safety Valve Co., Baltimore, Md.
Water gage	Talmadge Mfg. Co., Cleveland, Ohio
Gage cocks; inspection card holders	The Prime Manufacturing Co., Milwaukee, Wis.
Bell ringer	Railway Service & Supply Corp., Indianapolis, Ind.
Gages—air, back pressure and steam	Ashton Valve Co., Boston, Mass.
Gage holders	The Swanson Company, Chicago
Steam pipe joint packing; exhaust pipe joint packing	The Garlock Packing Company, Palmyra, New York
Whistle; operating valve and check; rail washer	Viloco Railway Equipment Co., Chicago

* For a description of this type of tender frame see the *Railway Age* for August 17, 1940, page 246.



The Cab Is Unusually Roomy and Controls Are Conveniently Arranged

Runboards; grating and runboard steps; front deck and cab deck.....Irving Iron Works Co., Long Island City, New York

Waist sheet bearer pad; boiler support pad; spring end pads; back trailer hanger padsFabreka Products Co., Boston, Mass.

Draft gear; draft gear yokes—engine and tenderW. H. Miner, Inc., Chicago

Coupler; pilot; pilot coupler pocket; driving springs; engine truck springs; trailer springsAmerican Steel Foundries, Chicago

Cylinder bushings; piston valve bushings; pistons; piston valves; cylinder packing rings and piston valve packing ringsHunt-Spiller Manufacturing Corporation, Boston, Mass.



One of the Four-Wheel Tender Trucks

Cab insulationJohns-Manville Sales Corp., New York

Cab ventilator; windshields; clear vision windows; curtainsThe Prime Manufacturing Co., Milwaukee, Wis.

Cab lampsThe Pyle-National Company, Chicago

Tender:

Frame; trucksGeneral Steel Castings Corp., Eddystone, Pa.

Wheels and axlesCarnegie-Illinois Steel Corp., Pittsburgh, Pa.

Coupler; springsAmerican Steel Foundries, Chicago

Journal bearingsAmerican Steel Foundries, Chicago

Brake shoesAmerican Brake Shoe Company, New York

Trailer box lids; truck boxes; truck-box lidsNational Malleable & Steel Castings Co., Cleveland, Ohio

Truck box padsFabreka Products Co., Boston, Mass.

Safety bars and drawbarStandard Steel Works Division of the Baldwin Locomotive Works, Eddystone, Pa.

Tank hoseUnited States Rubber Co., New York

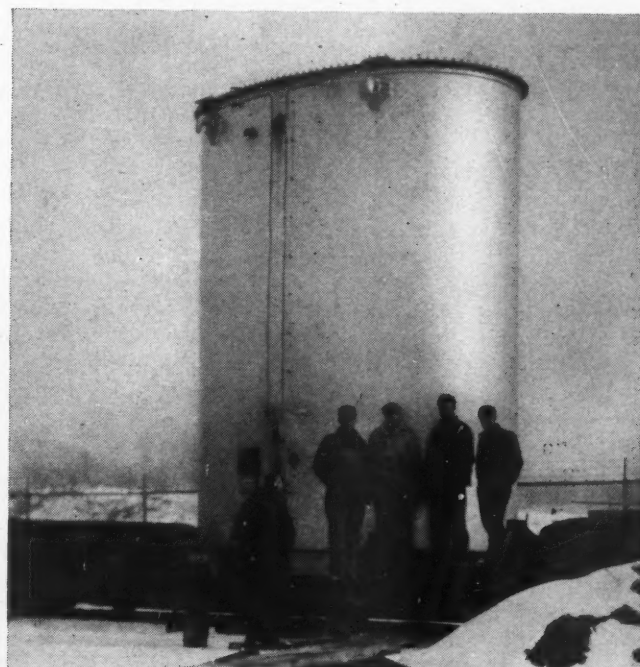
Tank valves; drain plugs; couplers and strainers; hose couplings....T-Z Railway Equipment Co., Chicago

Tank water level indicatorManning, Maxwell & Moore, Inc., Locomotive Equipment Division, Bridgeport, Conn.

Sleeve joints between engine and tenderFranklin Railway Supply Co., Inc., New York

A Hard One to Handle

THE accompanying photograph illustrates one of the many unusual tasks the railways are being called upon to perform as a result of war demands. It shows an electrical transformer that was shipped recently from Jackson, Mich., to Milwaukee. As loaded, the transformer weighed 190,000 lb., and when in service it contained 20,000 gal. of oil. On the special car that had to



The 190,000 Lb. of Transformer Stood 21 Ft. Above the Rail, and at a Height of 16 Ft., Had a Width of 11 Ft. 2 In.

be provided for the shipment, it stood 21 ft. above the rail and, at a height of 16 ft., it had a width of 11 ft. 2 in. The shipment originated on, and delivery was made by, the Michigan Central, although at Lansing it became necessary to detour it for a short distance over tracks of the Grand Trunk and the Pere Marquette because of clearance requirements.

Cylinder-by-pass valvesViloco Railway Equipment Co., Chicago

Cylinder cocks and operating valves...T-Z Railway Equipment Co., Chicago

Roller bearings, drivingThe Timken Roller Bearing Co., Canton, Ohio

Roller bearings—engine and trailer; clasp brakesAmerican Steel Foundries, Chicago

Axles, engine-truck wheelsCarnegie-Illinois Steel Corp., Pittsburgh, Pa.

Tires, driving and trailingAmerican Locomotive Co., Railway Steel Spring Div., New York

Trailer wheelsStandard Steel Works Division of the Baldwin Locomotive Works, Eddystone, Pa.

Driving wheel centersGeneral Steel Castings Corp., Eddystone, Pa.

Brake shoesAmerican Brake Shoe Company, New York

Foundation brakeAmerican Brake Div., Westinghouse Air Brake Co., Wilmerding, Pa.

Brake equipmentWestinghouse Air Brake Co., Wilmerding, Pa.

Crossheads; wrist pins; guidesStandard Steel Works Division of the Baldwin Locomotive Works, Eddystone, Pa.

Crosshead shoes; eccentric rod brasses; main and side rod bushingsNational Bearing Metals Corp., St. Louis, Mo.

Piston-rod and valve-stem packing....Paxton-Mitchell Co., Omaha, Neb.

Valve gearPilliod Co., New York

Reverse gearBaldwin Locomotive Works, Inc., Philadelphia, Pa.

Reverse-gear packingJohns-Manville Sales Corp., New York

Reverse-gear valveRailway Service & Supply Corp., Indianapolis, Ind.

Lubricator oil pipe covering; lubricator steam pipe covering; steam pipe coveringUnion Asbestos & Rubber Co., Chicago

Air-compressor lubricatorU. S. Metallic Packing Co., Philadelphia, Pa.

Firedoor; radial buffer; automatic compensator and snubber; bronze floating plates on all driving boxes..Franklin Railway Supply Co., Inc., New York

Mechanical lubricators; lubricator distributors; oil and terminal checks; flange oiler; lubricator tube fittingsNathan Manufacturing Co., New York

Lubricator tubing (steel)Bundy Tubing Co., Detroit, Mich.

Grease fittingsAlemite Div., Stewart-Warner Corp., Chicago

Locomotive valvesCrane Co., Chicago

Marker lampsThe Adams & Westlake Co., Elkhart, Ind.

Headlights and generatorThe Pyle-National Company, Chicago

Sanders; traps; operating valvesGraham-White Sander Corp., Roanoke, Va.

Valve Pilot; speed recorderValve Pilot Corporation, New York

Air-pump lubricator checksBonney Forge & Tool Works, Allentown, Pa.

Cab apronCarnegie-Illinois Steel Corp., Pittsburgh, Pa.

Cab seatsGustin-Bacon Mfg. Co., Kansas City, Mo.

Cab-door weatherstrippingBridgeport Fabrics, Inc., Bridgeport, Conn.

New Record Set in Oil Movement

**Expect to reach delivery of 1,000,000 bbl. a day
by rail as a result of new and improved schedules**

A NEW high in the transportation of oil to the East was established by the railroads during the week ending May 15, when they delivered an average of 980,652 bbl. per day of petroleum and petroleum products in tank cars. This new record compares with the 1942 high of 856,710 bbl. for the week of September 19 and the 1941 high of 141,300 bbl. for the week of October 18, 1941.

The establishment of a new high record in the handling of oil to the East is not a new experience for the railroads for the amount of oil they have delivered has shown a progressive increase since the early part of 1941, when only about 11,250 bbl. a day were handled. The railroads' heavy participation in the handling of oil to the East dates back to April, 1941, when the President asked that 50 tankers be transferred to British use. However, it was not until September of that year that they were called upon to handle large quantities. Without elaborate plans, they delivered more than 100,000 bbl. a day during October and November. In succeeding weeks the amount delivered dropped until it reached a low of 58,725 bbl. a day for the week ending January 10, and then began a miraculous climb which, within 14 weeks reached 600,000 bbl. and then continued upward, with a slight interruption during the winter of 1942-43 when bad weather slowed down train movements for a time.

A "Block System" Used at First

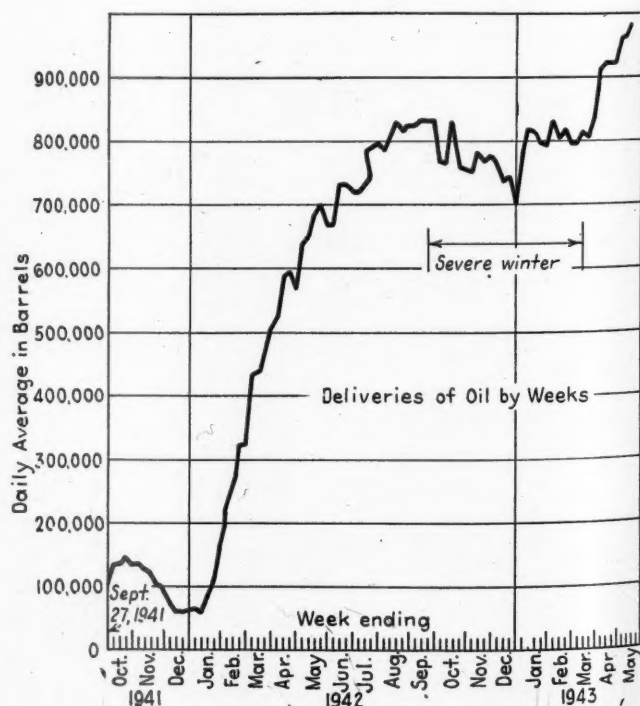
This phenomenal performance of the railroads in handling oil to the East has been due to the team work of the railroads, the oil companies and the tank car operators in carrying out a program which they arranged. A committee, representing all parties, was formed at a meeting in Chicago on July 7, 1941, and its efforts to bring about the most efficient use of tank cars were immediately reflected in the rise of oil deliveries.

Although deliveries rose to 800,100 bbl. a day for the week ending July 25, 1942, the demand for the transportation of more oil by rail still increased and the program was keyed up still further by the introduction, on August 1, of a "block system" of operation and 78 schedules over specified routes. Under the "block system," which was approved by the Office of Defense Transportation and the Car Service division of the Association of American Railroads, traffic managers of oil companies co-ordinated their routings individually and with those of other shipping companies in the same localities to set up large "block" and solid train movements over specified routes to Eastern destinations or break-up points. Prior to August 1, competition among the railroads had influenced the routing, with the result that all of the routes were not utilized to their maximum capacity. Also at some points, cars were dispatched at frequent intervals and handled in regular or solid trains while at other points they were not moved until a number had accumulated. Under the "block system," cars were dispatched from all points each evening as blocks in regular trains or as solid trains,

with the result that the number of solid trains was materially increased, both from the originating territory and from connecting points where blocks of cars were consolidated.

New Method Inaugurated

Deliveries showed further increases under the "block system" but the selection of routes and the detention of empty tank cars in the East interfered with the maximum utilization of the system. As a result it was replaced on December 28, 1942, with a new plan under which the carriers were authorized and directed to disregard instructions given by shippers, consignees or car owners with respect to the routing of loaded or empty tank cars. At the same time, revised routings included for the first time, schedules and routings for the return movement of empty tank cars and provided for the final distribution of much of the oil by truck and barge in the East so that tank cars could be released immediately and returned on schedule. Under this plan, 42 routes and schedules were established to handle train-lots of 30 or more loaded cars and trainlots of empty cars returning, the operating time for both loaded and empty cars being the same. Eighteen additional routes were established as "channel routes" for the movement of odd lots from various originating points. In the preparation of these routes, care was taken to insure the efficient and expeditious return of empty cars without a large amount of switching and classification. A total of 70,000 tank cars were assigned to the 60 routes and the schedules were adjusted so that 4,400 carloads, or 900,000 bbl., would be delivered each day.



When crude oil began to move by tank cars from the Eastern Terminus of the War Emergency pipe line at Norris, Ill., new routes had to be added and others revised in order to avoid overloading the carriers that would be called upon to handle the pipeline oil. As a result new routes and schedules were placed in effect on March 1. As traffic from pipelines increased, revisions in these schedules became necessary. The present routes and schedules include 62 symbol routes for trainlot movements and 19 channel routes covering movements between concentration and break-up points. The trainlot routes serve 36 origin and 25 destination points while the channel routes start at 96 originating points.

At the present time, through routes, supplemented by feeder lines which extend to less concentrated sections of the oil fields, carry the oil to the East. Of these, 62 symbol routes which originate at 36 points carry trainlot movements to 25 destination points in the East, while 19 channel routes move smaller lots from 96 originating points to concentration points where the cars are consolidated for trainlot movement or are placed in regular freight trains.

The number of trainlot routes radiating from an originating point varies from one to eight, the latter being the number of routes from Norris City. Of the originating points, Camps, Tex., Houston, Longview and Texas City, each feed six routes; Baytown, Bodie, East Chicago, Ind., Hawkins, Tex., Port Arthur and Whiting, Ind., each originate five routes and Baton Rouge, La., Chaison, Tex., and North Baton Rouge, each feed four routes. The number of routes per destination point under the trainlot schedules varies from one to ten, the latter being the number serving Bayonne, N. J. Of the destination points, Baltimore, Md., has seven routes; Bayway, Philadelphia, Pa., and Twin Oaks, each have five routes; and Linden, N. J., has four routes.

The schedules provide for daily departures but in some instances where production is low tri-weekly schedules are in effect. At times, 100-car trains of oil are dispatched but in the interest of safety and because of the difficulty experienced by some roads in handling long and heavy oil trains with other heavy traffic, the trains are limited to 70 or 75 cars. On the return movement, however, 100-car trains of empties are not infrequent. As a result of this restriction to 70 cars per train, cars in excess of this number, assigned to a certain route, are frequently turned over to another route. Such flexibility has enabled the railroads to balance the traffic and keep the oil moving from the originating points. At the same time the new system has enabled the railroads to set a record in car usage of 200 miles per car per day as compared with the 40 miles per day being made by other kinds of freight cars.

Loadings At Norris City Set Record

The amount of oil dispatched from origin points remains fairly constant and is reflected in the routes established, which vary from one to eight per point of origin. Norris City, the terminus of the "Big Inch" pipeline, has eight routes which, on the basis of eight 70-car trains a day, have a capacity of 560 cars a day. However, loadings at this point have been exceeding 800 tank cars a day and on one occasion recently totalled 1,049 cars. As a result, more than one train of as many as 100 tank cars has been dispatched over the routes from Norris City.

Trains of tank cars, both loaded and empty, move as



A Trainload of Oil Leaves Seminole, Okla.

scheduled trains. The speed at which oil trains travel often reaches 50 m.p.h. The terminal to terminal time is 140 hr. for distances of 2,100 miles. Loading and unloading detain cars several days and consequently the turn-around time on some routes is as much as 32 days.

One of the most helpful aids to the transportation of oil by rail has been the substitution of highway truck for deliveries in the East. At the beginning of the heavy rail movement, tank cars of oil were moved to remote points of consumption, with the result that many cars were scattered throughout the East and delay, caused by tardy unloading and difficulty of assembling the empties for the return movement, prevented maximum utilization of cars. Under the schedules in effect since December 28, destinations are centrally located so that final delivery can be made by highway trucks. The use of these highway trucks for the local delivery of oil throughout the country has released 14,000 tank cars from short-haul duty. According to the Office of Defense Transportation a single large tank truck unit can do the work of about 12 tank cars on hauls up to 100 miles and of about 6 cars on hauls of 100 to 200 miles.

The construction of additional facilities for unloading tank cars at oil terminals in the East has also aided in the movement of oil, and further projects that are now underway are expected to increase the daily handling capacity of these terminals by more than 950 tank cars. These added facilities are being constructed by the railroads and the oil companies, following surveys conducted by the Association of American Railroads, and

the Petroleum Industry War Council. The entire program, involving 23 projects, will cost about \$1,000,000.

Another aid to the transportation of oil by rail is the "Big Inch" pipeline from Texas to Norris City, which has released tank cars which carried the oil from Texas. From March 19, when the 24-in. pipeline was completed, until May 9, it delivered 10,000,000 bbl. of oil. About 800 tank cars of oil a day are moved from Norris City to the East while some is carried by tank car to the Enfield station of the Ohio Pipe Line Company which pipes it to refinery destinations. On April 14, the railroads serving this terminal set a record for the largest tank car movement from any point in the country, when they dispatched 1,049 tank cars loaded with 9,693,000 gal. of crude oil. The turn-around time for the 10,000 tank cars assigned to the Norris City service is about 11 days.

The flow of oil through this pipeline was stopped on May 18, when the Arkansas river overflowed and washed out part of the pipeline near Little Rock, Ark., but on May 23, a six-mile emergency pipeline loop around the break was completed and the full line-fill column of oil between Longview, Tex., and Norris City was re-established. The speedy construction of the temporary pipeline was made possible by the co-operation of the Chicago, Rock Island & Pacific on whose bridge the by-pass pipeline was laid. When the pipeline broke, it was necessary to transfer tank cars serving Norris City to Texas to offset the loss of pipeline transportation.

Kerosene in Drums

Still another aid to rail transportation of oil is the movement of kerosene in drums, the first movement of which occurred in January when a 39-car train of box cars loaded with kerosene in metal drums arrived in Boston, Mass. During the week ending April 3, shipments of kerosene reached a peak of 21,077 bbl. and they have since averaged about 19,000 bbl. a week.

Bag-type containers, Mareng cells and corrugated steel tanks that can be transported in box cars; and wood and steel tanks that can be moved in gondola cars are among the other devices that have been developed to increase the oil-carrying capacity of the railroads. The first 10 of a projected 50 "Flexitank" cars were placed in service recently. These are automobile box cars fitted with canvas "balloons" processed with a rubber substitute. Because of material shortages and costs, plans to construct Mareng cells for commercial use have been postponed. The conversion of 100 steel cement cars was recently completed and they are now handling oil between Destrehan, La., and Chelsea, Mass.

The construction of pipelines and barges has played a part in the handling of oil to the East but major credit for meeting the crisis belongs to the railroads, the tank car owners and the petroleum interests that have made possible the spectacular performance of rail transportation. The movement of these large amounts of oil has not been easy and the task has been made even more difficult by unfavorable weather. The last winter was severe and slowed down the movement of trains. High water in Illinois, Missouri, Indiana, Ohio, Oklahoma, Kansas and Arkansas during the period from May 17 to 22 interfered with train movements over wide areas and in some instances caused considerable delay, with a resulting decrease in deliveries.

Optimistic forecasts of the future movement of oil by rail anticipate that it will exceed a million barrels a day by fall. The Office of Defense Transportation in April predicted that tank car shipments by rail would average 885,000 bbl. a day for the second quarter of

1943; 862,000 bbl. for the third quarter; 860,000 bbl. for the fourth quarter; and 810,000 bbl. for the first quarter of 1944.

The Material Situation and Its Effect on Freight Cars

(Continued from page 1134)

been completed by ODT and the only materials which are being made available for new cars are for 1,200 troop carrying cars and possibly that required to complete some 19,000 of the 20,000 car program.

Last summer, when the demands for steel were becoming quite critical and the determination had been made to build new cars of composite design, it was realized by the Transportation Equipment Division that there soon would not be enough material available for repairs and maintenance in accordance with past practices. The Rolling Stock Section at that time undertook to develop possibilities of saving materials in the repairs of freight and passenger cars. It was apparent to all concerned that the rebuilding of cars with all steel bodies would have to be curtailed and also the entire replacement of large portions of the car bodies, such as sides, hoppers, floors, etc., would have to be drastically reduced by patching and salvaging material wherever possible. In order to promote such procedures, a repair and maintenance unit was established in the section and several men were put on the road to visit as many railroads as possible to acquaint them with the situation as it existed with the request that material saving be inaugurated. The response to these requests was very gratifying and most roads which had contemplated heavy rebuilding and repair programs curtailed their programs by using, to a great extent, salvaged materials. In a period of a little more than six months our field men visited at least once most of the larger roads in the country and many of the smaller ones. I know that it is only through restricted repair programs that we are enabled to find enough materials to adequately supply all roads.

Ordinarily, of course, the largest uses of steel in heavy repairs to freight cars occur on hopper and gondola cars. In normal times, it is efficient and economical to renew completely the floors or sides on complete groups of cars at regular periods, but to save critical material, we have requested that patching of both floors and sides be done whenever possible. For instance, where the sides of steel cars are rusted through at several places along the floor, only the lower section of the side should be renewed instead of the entire side, and the section that is removed can probably be cut into pieces for smaller patches on other cars. If the floor of a gondola car is so far gone that it cannot be renewed, consideration should be given to replacing it with wood. If the ends and slope sheets of hopper cars are absolutely beyond the patching stage, the request is made that they be renewed in wood. Even if wood will last only three or four years, it will have done the job. Our three main points on repairs are first, patch with salvaged material; second, patch with new material, and third, substitute wood for steel.

The A. A. R. has been very helpful with its recommendations on conservation of material and with its modifications of the Rules of Interchange where necessary. Although I have referred chiefly to steel, there are other car materials just as critical. Most of them cannot be substituted, but salvage and reclamation can reduce the demand.

Op Wage Hearings to Begin June 7

Engine unions disgruntled at Diesel decision—May refuse acceptance, hoping to exact more concessions

DR. WILLIAM M. LEISERSON, chairman of the National Railway Labor Panel, has appointed an emergency board to hear the case of the operating brotherhoods, which are demanding a wage increase of 30 per cent or \$3 per day, whichever is greater. The members are: Chairman, Walter P. Stacy, chief justice of the Supreme Court of North Carolina; Dr. I. L. Sharfman, chairman of the Department of Economics of the University of Michigan; and Frank M. Swacker, a New York attorney. Dr. Sharfman recently headed the board appointed to consider the wage demands of the non-operating employees and Mr. Swacker was chairman of the board investigating the claims of the engine service unions, in which they sought changes in working rules and in the basis of pay in the operation of Diesel and electric locomotives. Judge Stacy, in 1938, headed the emergency board which decided against the railroads' request for a wage reduction. Hearings of the emergency board have been set for June 7 and will be held in Room 2839, Grand Central Terminal building, New York.

Judge Stacy's Background

Judge Stacy was born on December 26, 1884, at Ansonville, N. C., and was graduated from the University of North Carolina with a Bachelor of Arts degree in 1908. During the remainder of that year and in 1909 he studied law at the U. of N. C., and he was awarded an LL.D. degree in 1923. After practicing law and serving in the North Carolina General Assembly, he became, in 1916, a Superior Court judge. In 1920 he was elected associate justice of the Supreme Court of North Carolina. He was appointed chief justice in 1925 to serve an unexpired term, and in the following year

he was elected to that position, which he still occupies.

Meanwhile Judge Stacy delivered lectures at law schools, and during 1927-28 he served, by appointment from the U. S. Board of Mediation, on a board of arbitration to settle a wage controversy between the Brotherhood of Locomotive Engineers and certain roads in Southeastern territory. He later became chairman of this board. In 1928 he was appointed by President Coolidge to membership on a five-man emergency board created to investigate a dispute between the Order of Railway Conductors and the Brotherhood of Railroad Trainmen and certain Western roads. The U. S. Board of Mediation again called upon Judge Stacy in 1931 to serve as neutral member of an arbitration board of six members in a controversy between the B. of R. T. and the New York Central, in which eight grievance cases were involved and the board upheld the employees in all but one case. In November of the same year he served in a similar capacity with respect to a controversy between the Brotherhood of Railway Clerks and the Railway Express Agency. President Hoover, in 1932, appointed Judge Stacy to a three-man emergency board investigating disputes between the Louisiana & Arkansas and the Louisiana, Arkansas & Texas and their employees with regard to reductions in pay for shopmen. In this instance the board found that the reductions should be withdrawn.

In 1933 and 1934, he was named by President Roosevelt to boards investigating controversies on the B. & M., the Texas & New Orleans and the Delaware & Hudson.

The latter controversy arose over the demand of train-service employees to return to a former standard wage contract based on mileage rates; the board, in this case, held that the parties go back to the old contracts



Wide World

Walter P. Stacy



I. Leo Sharfman



Frank M. Swacker

and suggested further negotiations for "back pay" claims.

Dr. Sharfman was born on February 10, 1886, in Polonoya, Ukraine, Russia. He was brought to the United States in 1894 and was educated at the Boston (Mass.) Latin School and Harvard University, where he was awarded an A.B. degree in 1907 and an LL.B. in 1910. He was admitted to the Massachusetts bar in 1909, and was an assistant in economics at Harvard during 1908-10. In 1910 and 1911 he was professor of law and political science at Imperial Pei-Yang University, Tientsin, China, and in 1912 he was chief investigator for the National Civic Federation's Department of Regulation of Public Utilities. Since 1912 Dr. Sharfman has been associated with the University of Michigan, as lecturer and professor of economics.

Dr. Sharfman is the author of a five-volume work on the Interstate Commerce Commission and has previously served in all kinds of proceedings under the Railway Labor Act on emergency boards appointed under Section 10, as a referee for the National Railroad Adjustment Board, and as an arbitrator in disputes involving employees of the Railway Express Agency and of Transcontinental & Western Air, Inc. During 1933-35 he was a member of the Federal Coordinator of Transportation's advisory committee on railroad employment.

Mr. Swacker was born in St. Louis, Mo., in 1879. He has been in private law practice since 1914, engaged mostly in railroad and financial matters. He has in the past participated in about 800 cases for the National Railroad Adjustment Board. From 1913 to 1920 he was special assistant to the Attorney General of the United States.

Engine Unions May Reject Diesel Award

The non-operating unions, meantime, have indicated—for purposes of public record—their dissatisfaction with the emergency board award which gave them 8 of the 20 cents in hourly pay increases they sought; but which denied their demand for a closed shop. However, these unions have also made it known that they grudgingly accept the wage increase, which will put them far above the "Little Steel Formula" and also ruptures the anti-inflationary wage and price "line" which—so White House publicity insisted—was going to be "held."

Far less agreeable has been the reaction of the engine unions to the award in the "Diesel pay case"—wherein the emergency board's recommendations very largely followed the contentions of the railroads. The general chairmen of the Brotherhood of Locomotive Firemen & Enginemen were in session this week at the Hotel Commodore, New York, to decide what action they would take with respect to the board's action. In a statement appearing in "Labor," President D. B. Robertson characterized the award as "harsh and intolerable." Alvanley Johnson, president of the Brotherhood of Locomotive Enginemen, said: "The board granted, or so it said, a one-tenth of one per cent wage increase. There could hardly be anything less than that."

Several general chairmen of the B. of L. F. & E. were quoted as referring to the decision as "an insult to the men who operate the locomotives."

At the time of going to press, it appeared that the enginemen's organizations—acting on the precedent established in December, 1941, when the unions successfully opposed the award of an emergency board—were disposed to refuse to accept the recommendations of the "Diesel board"; and might thus seek political support

in the effort to wring from the railroads concessions in excess of those which the board, having carefully heard both sides of the case, decided were justified. Union truculence won a victory over judicial methods in 1941, and the union leaders appear inclined to believe that it would stand a good chance of doing so again in 1943.

Freight Revenues and Commodity Values—1941

WASHINGTON, D. C.

RAILROAD freight revenues in 1941 amounted to 7.49 per cent of the value of the commodities transported, the Interstate Commerce Commission has reported in the latest issue of the study of freight commodity statistics and revenues published by the commission's Bureau of Transport Economics and Statistics at intervals since 1931. The first of these reports covered data for the calendar year 1930, and subsequent reports were issued at three-year intervals through 1939, but the present publication was prepared for the year 1941 instead of 1942, the bureau points out, because of the difficulty of obtaining satisfactory price data for the latter year.

The estimated value of commodities shipped in 1941 was \$61,725,101,000, on which freight charges amounted to \$4,624,819,000. These figures substantially exceeded those of recent report years, and in the case of freight revenue exceeded the year 1930, the largest previously reviewed in these studies. The percentage of freight revenue to the total value of commodities shipped in 1930 was 6.67; in succeeding reports it was calculated at (1933) 10.66, (1936) 8.47, and (1939) 8.43.

As in the 1939 study, the tonnage figures used are for tons originated or tons terminated, whichever was larger. The report points out again that this does not affect the overall percentages, but "for individual commodity classes, the use of the number of tons terminated gives an average freight revenue per ton considerably different from the average based on tons originated."

As in previous reports, the present study's tabulations show for each of the 157 commodity classifications the tonnage handled by Class I roads, the total freight revenue, the freight revenue per ton of 2,000 lb., and the wholesale market value of the commodities per ton at destination. The 1941 report was prepared, as were the two preceding it, by Edward Crane, statistical analyst. The 1939 report was reviewed in *Railway Age* of November 6, 1940, page 770.

Wide Variation Between Commodity Classes

The tabulations show averages for each of the commodity groups as follows:

	Freight Revenue		Value at Destination		Per cent freight revenue of value at destination
	Aggregate (thousands)	Per ton	Aggregate (thousands)	Per ton	
Products of Agriculture..	\$586,771	\$5.56	\$4,725,920	\$44.63	12.42
Animals and Products ..	187,273	10.81	5,049,600	291.44	3.71
Products of Mines	1,276,370	1.89	2,383,119	6.50	29.12
Products of Forests	315,639	4.03	2,495,812	31.83	12.65
Manufactures and Miscellaneous	1,951,925	5.64	42,848,752	123.80	4.56
Grand total, carload freight	4,317,978	3.53	57,503,203	47.06	7.51
L.c.l. freight	306,841	16.96	4,221,898	233.37	7.27
Grand total, carload and l.c.l. traffic	4,624,819	3.73	61,725,101	49.78	7.49

Within these groups the extremes of course vary wide-

ly, and in the whole the range in the per cent freight revenue of value at destination shifts from 66.39 per cent on straw to 0.84 per cent on tobacco, manufactured products. Among products of agriculture the variation ranges from the figure on straw, above, down to 2.28 per cent on tobacco leaf; among animals and products from 18.52 per cent on live animals, n. o. s., to 1.18 per cent on leather; among products of mines from 60.97 per cent on salt to 6.55 per cent on products of mines, n. o. s.; among products of forests from 64.06 per cent on posts, poles and piling to 1.73 per cent on crude rubber (not reclaimed); and among manufacturers and miscellaneous from 38.13 per cent on furnace slag to the tobacco, manufactured products, mentioned above.

In its introductory comment, the bureau points out, as in previous reports of this nature, that, since freight rates are not proportionate to the value of commodities, the figures presented in this study do not show, and are not intended to show, whether rates are too high or too low. They do, however, it adds, furnish a basis for comparisons of the value and character of freight moved by the railroads with that moved by other agencies of transportation, and also bear on discussions of the value of service and other economic problems associated with freight rate relationships.

Rebuilt Locomotives for Mexican Railways

RECONDITIONED and modernized in the shops of the Chicago, Burlington & Quincy, seven 34-year-old locomotives, which had been retired from American railroad service for several years, are being sent to Mexico to speed the southern republic's contributions of war materials to the Allied cause.

The locomotives, one of which is illustrated, are of the 2-8-0 type, built about 1909 for the Chicago & North Western and used on that railroad for many years. Recently, they were acquired by the United States government under the lend-lease program and the Burlington was given the job of reconditioning and modernizing them. Three were sent to the Burlington's shops at West Burlington, Iowa, and four to its shops at Denver, Col.

Each locomotive is being thoroughly overhauled and reconditioned. Since Mexican railroads burn oil, the

locomotives have been converted from coal to oil burning. In addition, they are equipped with new Baker valve gears, Franklin radial buffers and power reverse gears, Edna injectors and hydrostatic lubricators, Nathan water columns and Ashton back pressure gages.

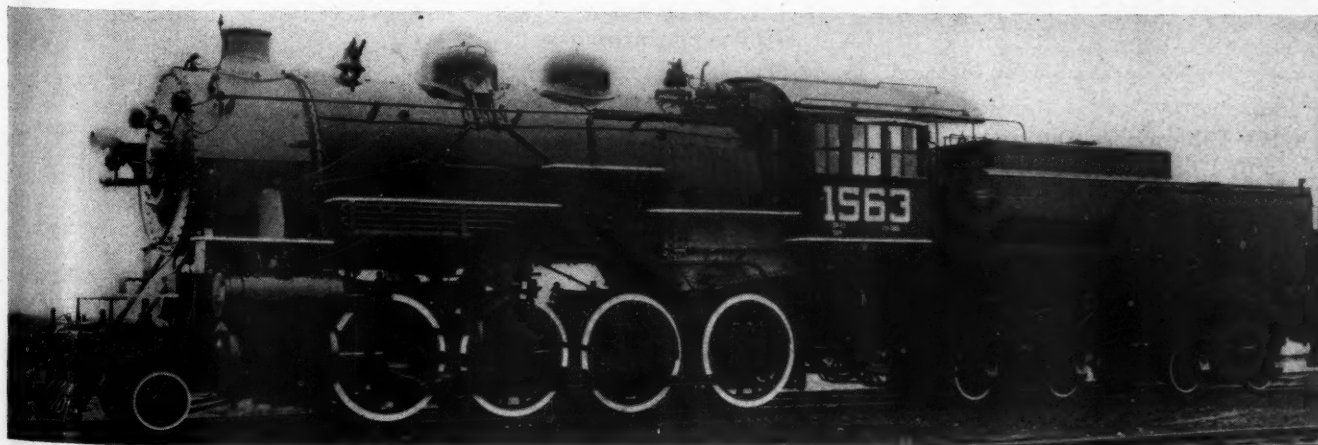
These locomotives have 25-in. by 32-in. cylinders and carry steam pressure of 185 lb. They develop 51,600 lb.



Carlos Rosales, Master Mechanic of the National Railways of Mexico, Explains to W. A. Newman, Burlington Shop Superintendent, the Meaning of the Mexican Water- and Fuel-Capacity Figures

tractive force. Each locomotive and tender, ready for service, weighs 399,700 lb. Special equipment carried on each locomotive, as required by the Mexican railways, includes one 25-ton and one 50-ton Joyce-Cridland roller-bearing jack presumably for re-railing purposes.

Several of the reconditioned locomotives already have crossed the Rio Grande and are in service on the Ferrocarriles Nacionales de Mexico (National Railways of Mexico). The others will follow in a few weeks. W. A. Newman, Burlington superintendent of shops, said the greatest difficulty encountered in preparing the locomotives for Mexican service was convincing his phlegmatic painters that the lettering on the tenders must show capacities of water and oil as "agua 31362 litros" and "aceite 13265 litros."



One of Seven Reconditioned 2-8-0 Type Locomotives Recently Sent to Mexico Under the Lend-Lease Program

Railroads-in-War News

Coal in Transit Is Again Frozen

Emergency measures reapplied
in off-again, on-again
strike of miners

Interstate Commerce Commission Service Orders No. 120 and 121, issued April 30 and May 1, respectively, and on May 3 suspended until further order of the commission, were reinstated by the commission, effective at 6 p.m. June 1, through its Service Orders No. 120-B and 121-B. These orders serve to put into effect emergency regulations of the Solid Fuels Administrator "freezing" in transit considerable quantities of bituminous and anthracite coal, which orders in turn were reinstated June 1 when the coal miners' "work suspension" again became effective.

In general, the I. C. C. orders prohibit railroads from delivering coal to consumers who have on hand more than a 10-day supply of bituminous coal or a 5-day supply of anthracite. Some 3,000,000 tons of coal, it was estimated by Mr. Ickes, will thus be made available to war plants and other users in danger of having to curtail operations or close down through lack of fuel.

As was the case with the orders issued just before the 15-day truce became operative on May 3, these regulations apply only to coal in transit at the time they became effective. Coal shipped on and after June 1 from mines that did not suspend operations on that date, or resumed operations after that date, is exempt from the "freeze" and may move to consignees without restriction, the SFA explained.

Other coal shipments exempted from the terms of the orders include: Coal for export, including that consigned to Canadian points; shipments consigned for water movement or for use on a vessel; coal for delivery to a connecting rail carrier; or coal placed on a consignee's siding for the railway's convenience and not to be unloaded.

OPA Liberalizes Definition of "Tie Contractor"

A change in the definition of qualifications of tie contractors, announced May 31 by the Office of Price Administration as Amendment 1 to Maximum Price Regulation 216, will permit more small operators to qualify as tie contractors, the OPA said, and so to receive compensation at the rate of 20 cents per tie for the concentration service they perform.

The definition was broadened to permit those selling one million board feet or more of ties in the 12 months preceding October,

Roosevelt Grateful for Rail Service on Recent Trip

President Roosevelt has written to J. J. Pelley, president of the Association of American Railroads, a letter thanking A. A. R. member roads "for the very excellent job which they did all along the line" in connection with the President's recent trip through the South and Southwest.

Addressing the A. A. R. president as "Dear John," Mr. Roosevelt said he realized "the enormous amount of work entailed" on the trip which "was completed without a hitch." In his reply, Mr. Pelley told the President that it was "most gratifying to have your advice as to the excellent and satisfactory manner in which the railroads handled the movement." He added that it would be a pleasure to convey the President's message of appreciation to all the rail lines involved.

1942, to qualify as tie contractors. The minimum volume of business previously required to meet the OPA definition was two million board feet in the same period.

Coal Subsidy Adjusted to New Freight Rate Level

"Determined charges" for measuring government, payments to receivers of coal in New York and New England on account of wartime increases in the cost of transportation have been reduced six cents per gross ton by the Office of Price Administration. The OPA action, which does not affect prices at the consumer level, reflects the May 15 removal of the Ex Parte 148 increase in rates on coal.

ODT Appointments

Harry L. Hammill, former general agent of the Chicago & North Western at St. Louis, Mo., has been appointed assistant director of the Office of Defense Transportation's Division of Railway Transport, in charge of rail-truck coordination in the St. Louis territory. He succeeds George R. Bush who has been transferred to ODT's Chicago office.

Harvey E. Lounsbury, whose retirement as traffic manager of the Union Pacific, with headquarters at Portland, Ore., was reported in the *Railway Age* of March 6, has been appointed assistant director of rail-truck co-ordination, a new section in the Portland (Ore.) Office of Defense Transportation.

Uptrend Resumed in Oil Movement

Railroads rapidly overcoming
flood effects, but East's
rations are tightened

A report of progress in the restoration of the movement of petroleum by tank car into the Atlantic coast area, and particularly to the northeastern section where the shortage has reached the most acute stage, after the widespread disruption of transportation caused by the Midwest floods, was coupled by the Office of Defense Transportation with a reminder that the current gasoline shortage in the Northeast will continue indefinitely.

It was pointed out that the scarcity of gasoline in the region north of Washington, D. C., developed before the effects of the floods were felt, at a time when the movement of oil to the East by tank car was the largest in history. It follows, the ODT indicated, that restoration of deliveries to pre-flood levels will not end the emergency in that section.

Deliveries to 25 eastern terminals that receive some 90 per cent of the tank car movement into that region averaged 821,560 barrels a day during the 4-day period ending May 31, the ODT disclosed. This average was 18.8 per cent above the level of the previous four days, but remained 9.4 per cent below the daily average for the week ended May 8. Transportation in the Midwest is expected to be largely restored to pre-flood levels by this week-end, the ODT commented, but this recovery is not expected to be reflected in deliveries in the East for several days thereafter.

Meanwhile the War Production Board and the ODT acted to set up a priority system to be used in granting supplemental gasoline allotments to commercial motor vehicle operators in the shortage area. Such allotments will be made, it was said, only where "essential commercial services" cannot be maintained under the 40 per cent gasoline ration "stretch out" announced by ODT last week, as reported in *Railway Age* of May 29, page 1104. Emphasizing that only services vital to the war effort and the public welfare can be fully maintained during the emergency, the ODT pointed out that only a "limited number" of highway operators would be able to qualify under the priority system for additional fuel, and very few of those qualifying would be allotted the full 40 per cent cut.

As certified by the WPB, the ODT has announced four categories of bus and truck operators entitled to priorities. These are: (1) trucks hauling supplies

for the Army, Navy, Maritime Commission, or Lend-Lease for export; (2) buses rendering "vital public transportation service"; (3) trucks serving the "basic operations" of a WPB-defined essential industry; and (4) buses or trucks performing services necessary to the war effort or the essential civilian economy. Under this priority system, it was explained, an operator serving the "basic function" of an essential industry or otherwise meeting the general requirements must support his request for supplemental fuel allotments with records of operations that indicate that "waste operations" have been eliminated and that the "maximum service of their available facilities" are devoted to essential transportation.

Preferential treatment under this system will be accorded trucks serving hospitals, food distribution, transportation services—including railways, railway terminals, shops and maintenance operations, public utilities, public communications services, municipal services, mineral and metal production, petroleum producers and refiners, rubber plants, and some 46 specified types of industrial plants, including builders of locomotives and railroad cars.

These actions followed the ODT's General Order No. 39, issued May 27, under which bus and taxicab operators in the shortage area were directed to put into effect an immediate 20 per cent cut in mileage as a first step toward meeting the 40 per cent over-all reduction in fuel allotments.

Additional action to increase the supply of gasoline available for civilian use at various eastern points has been taken in the past few days by the ODT and the Petroleum Administrator for War. Regulations covering movements on the Ohio River, which had been restricted to transshipment only by pipelines, were relaxed to allow transshipment by any form of transportation, including tank cars, within certain sections of District No. 1. Barge movements of gasoline from Pennsylvania to West Virginia were prohibited. Arrangements for transporting an average of 8,000 barrels of gasoline daily for a period of one week by truck from the Greensboro, N. C., pipeline terminal to Washington, D. C., and Baltimore, Md., were put into effect to build up stocks in those markets.

Would Exempt States and Their Sub-Divisions from Freight Tax

Representative Robertson, Democrat of Virginia, has introduced H.R. 2797 to exempt from the tax on transportation of property amounts paid by states and political subdivisions. Amounts paid by the federal government or its agencies are already exempt.

Roads Asked to Amend Tariffs on Car Icing

Following a series of tests by the Department of Agriculture that indicated, the department said in a May 31 press release, that refrigerator car ice bunkers that are filled only down to the half stage will refrigerate carloads of fruit and vegetables as effectively as bunkers filled to capacity,

the department's War Food Administration has proposed to American railways that they "amend the perishable protective tariff so as to allow 'half stage' icing."

The proposal was contained in a petition addressed to J. J. Quinn, chairman of the National Perishable Freight Committee at Chicago. In it the committee was asked to publish rules, regulations and charges for "standard" and "modified" forms of half stage refrigeration. Under standard refrigeration, the WFA said, bunkers are re-iced at all regular icing stations en route, while under modified refrigeration the shipper specifies some type of shipping-point refrigeration service with one or two re-icings in transit.

The department's tests proved, it was said, that only the ice in the upper half of the car bunker effectively cools the warm air, which rises against the ceiling, while the ice in the lower half of the bunker, though its weight is 16 per cent of the combined load of ice and commodities, merely provides support which a half stage gate can perform equally well.

Cars arriving at hold or delivery points with bunkers less than three-fourths full are now re-iced to capacity, the WFA explained. In most such cases, it added, when shipments are unloaded promptly 6,000 to 8,000 lbs. of ice remains in the bunkers, and large quantities frequently are found in the car when it is returned to the shipping point. With half stage icing, the amount of ice required would be substantially less, the department went on to say, and its introduction would effect financial savings to producers and shippers, as well as prevent "a large economic waste" of motive power, manpower and "war-short" ice.

It was pointed out that about half of the refrigerator cars in service are now equipped with half stage gates, while others are being so equipped as they are shopped for general repairs. Labor and materials required to install such gates in all cars would be negligible, the WFA claimed, as compared with savings that would result from the proposed amended tariffs.

President Creates Overall Office of War Mobilization

President Roosevelt on May 27 issued an executive order creating a new Office of War Mobilization "to unify more closely the work of the war agencies concerned with the production, procurement, transportation and distribution of military and civilian supplies, materials and products." It will be under the direction of former Supreme Court Justice James F. Byrnes, who thus moves up from his present role of director of the Office of Economic Stabilization. The latter has been taken over by Judge Fred M. Vinson, who has resigned as a member of the United States Circuit Court of Appeals for the District of Columbia.

Although the agencies involved were not listed, the executive order was broad enough to extend Mr. Byrnes' jurisdiction to all war agencies, including the Office of Defense Transportation. The order also establishes a War Mobilization Committee of which the director of OWM is made

chairman and "with which he shall advise and consult." In addition to the director, the committee consists of the Secretary of War (Henry L. Stimson), the Secretary of the Navy (Frank Knox), the Chairman of the Munitions Assignment Board (Harry Hopkins), the Chairman of the War Production Board (Donald M. Nelson), and the Director of Economic Stabilization (Judge Vinson).

"The committee," the White House announcement said, "has been purposely kept small so that it can function more effectively. But the heads of the various departments and agencies will be asked to sit with the committee whenever matters of special concern to their departments or agencies are under consideration." The function of the director of OWM, "acting in consultation with the committee and subject to the direction and control of the President," is set forth in the executive order as follows:

(a) To develop unified programs and to establish policies for the maximum use of the nation's natural and industrial resources for military and civilian needs, for the effective use of the national manpower not in the armed forces, for the maintenance and stabilization of the civilian economy, and for the adjustment of such economy to war needs and conditions;

(b) To unify the activities of federal agencies and departments engaged in or concerned with production, procurement, distribution or transportation of military or civilian supplies, materials, and products and to resolve and determine controversies between such agencies or departments, except those to be resolved by the Director of Economic Stabilization under Section 3, Title IV of Executive Order 9250; and

(c) To issue such directives on policy or operations to the federal agencies and departments as may be necessary to carry out the programs developed, the policies established, and the decisions made under this order. It shall be the duty of all such agencies and departments to execute those directives, and to make to the Office of War Mobilization such progress reports as may be required.

New Fair Employment Practice Committee

Following through on his previously-announced plans to revise and strengthen the federal government's machinery for dealing with discrimination in employment, President Roosevelt on May 27 issued an executive order creating a new Committee on Fair Employment Practice headed by Monsignor Francis J. Haas, dean of the School of Social Sciences of the Catholic University of America. Not more than six other members will be appointed by the President.

The former committee of the same name had scheduled a series of hearings early this year on complaints wherein Negro railroad employees, principally firemen, alleged that certain railroads, acting alone or in agreement with labor unions, had discriminated against them because of their race. As noted in the *Railway Age* of January 16, page 224, the hearings were called off at the direction of Paul V. McNutt, chairman of the War Manpower Commission, who had jurisdiction over the former committee.

The new committee is not under WMC jurisdiction; like other independent war agencies, it is established in the Office for Emergency Management of the Executive Office of the President. The executive order reaffirms "the policy of the United States that there shall be no discrimination in the employment of any person in war industries or in government by reason

of race, creed, color, or national origin"; and declares it to be the duty of all employers and labor organizations to eliminate such discriminations.

The order further stipulates that provisions obligating contractors not to dis-

criminate shall be included in all contracts entered by contracting agencies of the government. Similar measures were ordered for all government departments concerned with vocational and training programs for war production.

Materials and Prices

Following is a digest of orders and notices of interest to railroads issued by the War Production Board and the Office of Price Administration since May 29.

Galvanized ware—Supplementary Limitation Order L-30-a, as amended May 27, permits 75 per cent of the base period use of iron and steel in the production of ash cans and pails, compared to the previously allowed 50 per cent. The base period was the 12 months ended June 30, 1941. Kerosene and gasoline storage cans, previously banned, now may be produced up to 50 per cent of the base period rate of use of iron and steel. Buckets for bored wells are exempted in the order and also certain containers in which oil is sold and which are produced in fulfillment of a purchase order accompanied by an authorization as described in Order M-255.

Lead—Limitation Order M-38, as amended May 26, made lead more readily available as a substitute for critical materials for essential production. A survey showed that it is no longer necessary to restrict essential uses of lead. Only non-essential uses will be controlled hereafter by Order M-38 as amended. Items no longer classified as prohibited include gutters.

Shipping drums—Bulletin WPB-3713, issued May 29, notified users of new steel shipping drums of the correct procedure in obtaining a preference rating required prior to submitting application on Form PD-835 for new steel shipping containers. Users who now have a preference rating should make application for authorization to purchase new steel drums on Form PD-835. A user not operating under CMP or PRP, who does not have a preference rating assigned, must first obtain it on Form PD-25F or Form CMP-4-b. After receiving the preference rating, he should apply for authority to purchase new steel shipping drums on Form PD-835. A user operating under CMP or PRP, who does not have a preference rating assigned, must file for such rating on Form PD-1-a.

Prices

Cross ties—Amendment No. 1 to Revised Maximum Price Regulation No. 216, effective June 4, was broadened to permit sellers of 1,000,000 ft. bd.m. or more of cross ties in the year preceding October 1942 to qualify as tie contractors. Previously, sale of 2,000,000 ft. in the qualifying period was necessary. The change permits the small operator who must pay the ceiling price to the tie producer to receive compensation of 20 cents per tie for accumulating ties in a yard where they become available for purchase by railroads in quantity.

Another change revises boundaries of the geographical areas of eight producing zones along lines to conform more closely to past industry practice. The southern boundary of Zone 8 (Lake States) is brought down to the southern boundary of the States of Minnesota and Wisconsin, thereby including in Zone 8 certain counties which were in Zone 3. The western boundary of Zone 2 (North Central States) is extended westward to the Iowa-Nebraska line, and its southern boundary is extended in a general westerly direction to put into Zone 2 the northern half of Illinois and Iowa, formerly in Zone 3. The western and southern boundaries of Zone 4 (Appalachian States) is extended to include the northwestern counties of Kentucky. The former differential between northwestern Kentucky, Indiana and Illinois was 25 cents per tie, causing producers in Kentucky to move their ties across the Ohio River to secure the higher price. The present arrangement establishes a differential of only 15 cents per tie, which is not sufficient to pay for the cost of transportation from normal distribution channels.

Another change establishes dollars-and-cents prices for items which previously were priced by the seller, who then submitted prices to OPA

for approval. Class U ties (used untreated) are priced in new tables for heart cypress in Zones 5 and 6. The dollars-and-cents prices range from 25 cents to \$1.50 each in Zone 5, and from 25 cents to \$1.70 in Zone 6, according to size. Switch ties in both zones are given a ceiling price of \$55 per 1000. Heart whiteoak ties are set at 10 cents above mixed oak ties, and \$3 per 1000 above mixed oak switch ties in all zones. Heart pine ties are given the same differentials as oak. Permissible additions for longer lengths of switch ties over standard lengths are created as follows: \$3 per 1000 ft. bd.m. for ties over 16 ft. in length and up to and including 20 ft.; \$7 per 1000 ft. over 20 ft. and up to and including 24 ft.; \$15 per 1000 ft. over 24 ft. and up to and including 28 ft.; \$20 per 1000 ft. over 28 ft. The amendment provides the following percentage markups to compensate the seller for the seasoning costs: for softwoods, 6 per cent addition to maximum prices if seasoned 90 days or longer; for hardwoods, 10 per cent if seasoned longer than 90 days, but less than 180 days, and 12½ per cent when seasoned longer than 180 days. When switch ties are sold and loaded in sets as required by the purchaser, and addition of \$2.50 per 1000 bd.ft. may be made to the maximum prices.

Amendment No. 1 also relaxes the provisions prohibiting the payment of purchasing commissions. A commission may be paid by a contractor or user, provided all of the following conditions are met: (1) the person receiving the commission must be a full-time employee carried on the payroll; (2) the money used in purchasing ties must be supplied by the contractor or user; (3) the employee's compensation is not to be based on the result of final inspection of ties by the user; (4) the person receiving the commission is not a producer of railroad ties or a tie contractor; (5) the commission or bonus is not greater than 10 cents per tie.

Another change establishes a uniform switch tie price for all sellers. The new price includes the former \$5 addition for tie contractors. The \$5 addition will permit the production of switch ties without penalty to the mill which might otherwise produce timbers at the higher prices provided for timbers in OPA lumber price regulations.

Hardware—Amendment No. 2 to Revised Price Schedule No. 40 (builders hardware and screen), effective June 3, changes methods for pricing new models or types of builders hardware and screen sold by manufacturers and jobbers and requires approval of prices for the types which were not sold during the base period of October 1941. The changes will not affect the general level of prices established under the existing provisions but will act to simplify pricing by the manufacturers and jobbers and will tighten administration and enforcement of the regulation.

Lumber—Amendment No. 4 to Maximum Price Regulation No. 253 (redwood lumber and millwork), issued May 28, permits dry redwood timbers in the smaller sizes to be sold at maximum prices of \$26 per 1,000 bd.ft. higher than green timbers. The order covers timbers 5 by 5 in., 6 by 6 in., and 6 by 8 in. The amendment extends to gutters and mouldings.

Maximum Price Regulation No. 219 (northeastern softwood lumber), Regulation No. 222 (northern softwood lumber) and Regulation No. 368 (northeastern hardwood lumber) were clarified May 28 by notices that the only permissible methods of pricing Canadian lumber for sale in this country require that the maximum price shall be the mill price and differentials for the grade plus transportation from the basing point on the basis of estimated weights for the different types and grades of lumber appearing in the regulation. No additional charges for duty or any other charge or fee incurred in importation may be added.

Lumber—Limitation Order L-290, as amended May 19, exempts white fir lumber produced west of the Cascade mountains from restrictions im-

posed by the new order. The mills are governed by Limitation Order L-218 on Douglas fir production and by Order M-208 on hemlock and white fir output.

Price interpretations—The twenty-first of a series of pamphlets digesting interpretations of specific price schedules and regulations, other than the General Maximum Price Regulation and Regulation No. 165 (services), was distributed May 17. Rulings clarify Price Schedule No. 4, with reference to the lowest established charge for transporting iron and steel scrap; Price Schedule No. 41, relating to prices of miscellaneous steel castings for railroad specialties, for miscellaneous steel castings and for the taxes on railroad specialties. The tax may not be added to the maximum prices of railroad specialties delivered in base territory. Where the railroad specialties are delivered outside of base territory, the producer may add to the maximum price only the tax on the transportation charges which the purchaser is required to pay pursuant to Section 1306.113 (a)(4). A ruling on Price Schedule No. 46 prescribes that in selling relaying rail, a Class I railroad should be considered separately from its parent company for the purpose of determining the f.o.b. shipping point under the schedule, whether the subsidiary is wholly or partly owned by the parent company. A Class II and Class III railroad is considered as part of the parent company in determining the f.o.b. shipping point. The digest also includes interpretations of Price Schedule No. 49 on the resale of iron or steel products; Regulation No. 230 on the prices of reusable iron and steel pipe; Regulation No. 55 on second hand bags; Regulation No. 19 on the moisture content waived basis of selling southern pine lumber, and Regulation No. 136 on machinery and parts, and machinery services.

Rubber boots—Ration Order 6A, effective June 5, revoking Order 6, rations six types of industrial rubber footwear which can be made with a high crude rubber content. The boots are available to linemen and construction workers. A purchaser is no longer required to turn in worn-out rubber footwear of the rationed types at the time he buys a new pair. Purchasers of footwear may return it for refund if it has not been worn.

Scrap—Amendment No. 12 to Revised Price Schedule No. 4 (iron and steel scrap), effective May 29, established weights to govern scrap shipments, added new listed grades of scrap, established a floor of \$14 per gross ton for No. 1 heavy melting steel, and designated new remote points to which preparation in transit privileges will apply. The general rule is established that settlement for all scrap shall be made on the basis of weights at the point of delivery. However, if weights at the shipping point have been determined, no adjustment need be made for differences of 500 lb. or less per car between shipping point weights and weights at the point of delivery. If the difference exceeds 500 lb. per car, adjustment must be made for the full shortage in the car.

The \$13 per gross ton floor for No. 1 heavy melting steel with established differentials for other listed grades of steel scrap has been increased to \$14 per gross ton. The change eliminates the \$1 per gross ton differential that certain Gulf Coast ports had over adjacent areas. Iron and steel scrap reclaimed from slag dumps is priced according to the percentage of iron content. If the material contains 85 per cent or more iron, it takes a differential of \$2 per gross ton under No. 1 heavy melting steel. A differential of \$4 per gross ton applies to an iron content of 75 to 85 per cent, and \$8 per gross ton to an iron content under 75 per cent.

The amendment designates Arkansas as remote, and all non-remote shipping points in Nebraska and Kansas are made remote. Certain preparation-in-transit privileges may apply to scrap shipped from these areas. The limitation for remote scrap has been increased to \$7 from \$5 per gross ton. This reduces the number of cases in which consumers must receive prior approval before absorbing the full transportation charges incurred in moving scrap from remote shipping points. Effective May 15, the Interstate Commerce Commission suspended the 6 per cent increase in freight rates which became effective in March 1942. Amendment No. 12 removes certain language previously inserted in the schedule to indicate the method of handling the freight increase whenever it was incurred in moving scrap from the shipping point to the point of delivery.

GENERAL NEWS

Pacific Terminal Charge Unapproved

Commission says carriers have not justified levy of 5 cents per cwt.

The Interstate Commerce Commission, Division 2, has found that the proposed terminal charge of five cents per 100 lb., in addition to line-haul rates, at Pacific Coast ports has not been shown to be just and reasonable. Its report in I. & S. No. 5146 orders cancellation of the suspended schedules which were protested by the Secretary of War, the Price Administrator, the Governor of Hawaii, and "certain shippers, associations and chambers of commerce."

The proposal involved discontinuance of the practice of many years standing whereby the railroads absorb the terminal charges out of their line-haul rates in connection with export and import traffic. Since no change in the line-haul rates was proposed, the commission stated that the burden was upon the carriers to prove "that not only the terminal charges, considered alone, but also the through rates made by adding the proposed terminal charge to the line-haul rates, are just and reasonable."

That burden "has not been sustained," the report added.

Previously it had pointed out that the proposed five-cents-per-100-lb. charge would apply uniformly at all Pacific ports on a wide variety of commodities; and that "viewed as an increase in rates," it would represent boosts varying "from 1.1 per cent on the highest rated articles to 11.3 per cent on the lowest rated articles." Later on the report had this to say:

"The equalization of ports, brought about by the absorption of varying terminal costs out of the line-haul rates, may be reasonable and nondiscriminatory in contemplation of the resulting benefits and the relatively slight differences in particular costs in comparison with total costs of the aggregate through services. It is quite a different matter for the carriers to establish a separate terminal charge which ignores the wide disparities in the extent of the terminal services performed and the cost of those services, as between different ports, and different docks at the same port, and as between different commodities. . . .

We conclude that the proposed charge would be unjust and unreasonable to the extent that it would apply on traffic which receives services or entails terminal costs substantially less than the average on which the charge is based."

John F. Stevens Dies

John F. Stevens, noted retired civil engineer and formerly vice-president of the Chicago, Rock Island & Pacific, the New York, New Haven & Hartford and president of the Spokane, Portland & Seattle, died on June 2 at his home in Southern Pines, N. C., at the age of 90.

Ownership of Stock in Freight Forwarders

The Interstate Commerce Commission has instituted an investigation into the matter of officers, directors, employees, or agents of common carriers subject to Parts I, II, or III of the Interstate Commerce Act owning stock in a freight forwarder subject to Part IV in violation of the provisions of section 411(c). The proceeding is docketed as Ex Parte No. 155.

Motor Act Amendment

Senator Lodge, Republican of Massachusetts, has introduced S. 1148 to amend the Interstate Commerce Act by liberalizing the exemption proviso covering motor vehicles used in the transportation of ordinary livestock, fish, or agricultural commodities. While the present law exempts from regulation vehicles of producers or private carriers if they are used "exclusively" for "agricultural" purposes, the amendment would exempt them provided any other property or passengers carried were not transported for compensation.

Acme Fast Freight Gets Permit

The Interstate Commerce Commission, Division 4, has issued to Acme Fast Freight, Inc., a permit under the Interstate Commerce Act's Part IV authorizing continuance of operations as a freight forwarder "between all points in the United States." The report is in No. FF-72.

Rail-Air Express in March

An estimated total of 132,031 air express shipments were handled over the nation's commercial airlines in March. Of this total, 34,042 shipments, or 34.7 per cent, were moved in rail-air service. Average revenue per shipment on this rail-air traffic was 40.3 per cent higher than the average revenue of shipments moved exclusively by air. Gross revenue of this traffic, which either originated at or was destined to a non-airport city or moved part way by rail, increased 125 per cent. The number of rail-air shipments for March increased 49.6 per cent over the same month last year.

Need Seen to Keep Reserves in Cash

I. C. C. supports legislation requiring liquidity of depreciation funds

The Interstate Commerce Commission favors, in principle, that provision of S. 931, introduced by Senator Stewart, Democrat of Tennessee, which would require railroads to maintain in liquid form a fund for the replacement of depreciated property. It would, however, broaden the provision to make the fund available for reducing indebtedness or for tiding carriers over temporary financial difficulties. Also, the commission would have the fund include amounts reflecting amortization deductions as well as depreciation accruals, and would further provide that it should not duplicate capital funds which have been set up as part of railroad reorganization plans.

The commission's views were expressed in a recent letter sent by Commissioner Splawn, chairman of its legislative committee, to Chairman Wheeler of the Senate committee on interstate commerce. The commission does not favor that other provision of the Stewart bill which would require maintenance of a second fund to meet the operating deficit of any month in which the operating expenses exceeded income. "The experience of a number of railroads," the Splawn letter said, "shows that the percentage of earnings that would be necessary to attain the desired end would have to be very large, and we doubt the efficacy of such a plan for that reason."

It went on to point out that "approximately 30 per cent of the net income for the years 1930 and 1931 would have been required to meet the deficits for 1932, 1933, and 1934, and nearly 50 per cent of the net income for 1935, 1936, and 1937 would have been required to cover the deficit for 1938." The commission view is that "the accumulation of buffer funds during prosperous years for meeting charges during years of depression is a matter that might well be left to the discretion of those responsible for the management of the companies." Thus it favors elimination of the provision entirely, but suggested a rewording in case the provision is retained.

Aside from the suggested broadening of the provision calling for the property-replacement fund, as noted above, the commission would eliminate repairs from the list of things for which money from the fund could be spent. Also, it would require that income from interest on securities or cash of which the fund is composed shall be added to the principal sum.

The commission would rewrite the bill's provision with respect to investment of the fund, to allow carriers to put the money into cash reserves, obligations of, or guaranteed by, the United States government, and securities which are legal investments for savings banks. As now written, the bill requires commission approval for investment of the fund, except that portion which is maintained in cash or U. S. government bonds.

Other changes suggested by the commission would give it more discretion as to the form and contents of reports to be made in connection with the fund, and restrict the application of the bill to railroad companies. "The need for legislation of this kind," the Splawn letter said, "appears to us to pertain chiefly to railroad companies and we, therefore, recommend that pipeline companies, sleeping-car companies, express companies, and water carriers be excluded. Moreover, the commission would exempt railroads in the process of reorganization.

Commission Opposes Compulsory Competitive Bidding

Opposition to the purposes of a bill (S. 874) introduced in the Senate on March 12 by Senator Shipstead, Republican of Minnesota, which would require competitive bidding in connection with the sale of all railroad securities, has been expressed by the Interstate Commerce Commission in a report submitted through Commissioner Splawn.

The report pointed out that the commission already has authority to require competitive bidding in security transactions, and since 1926 has required that practice in the case of equipment trusts. Although application of such a requirement to substantially all railroad security issues has been considered from time to time by the commission, it added, such general action has not been thought advisable. Whether or not competitive bidding should be required should depend on the circumstances of each particular case, the commission suggested. It is, the report said, already in a position to determine whether a carrier is getting a fair and adequate price for its securities, whether sold through competitive bidding or by private contract, and the burden of proof in this connection rests with the carrier. Failure to justify a proposed price might result in formal disapproval of the application, it pointed out.

There are advantages to the sale of securities through private contract, the commission suggested. For example, "one advantage is that the work which financial houses and their experienced lawyers are able to perform in connection with security issues results in getting the instruments into approved and merchantable form, and in many instances is necessary to insure their acceptance by investors."

In general, it indicated, sales through competitive bidding are easy in a rising security market but difficult in a declining market. In its opinion, "sales of securities at competitive bidding will not always result in a carrier receiving a fair and adequate price for its securities. If competi-

tive bidding were the only method by which a carrier could market its securities it might in some instances be unable to market at all."

Competitive bidding would be impracticable with certain security issues, the report pointed out, calling attention to convertible bonds, short term notes, exchanges of securities, issues by subsidiary companies for the owning company's benefit, and small issues, particularly of locally financed lines, as examples. If legislation requiring competitive bidding should be enacted, the report suggested, some provision should be made for private contracts to meet such situations, or to cover circumstances where competitive bidding failed to develop suitable offers.

Bickers Succeeds Cole as Secretary of N. M. B.

Thomas E. Bickers, a member of the National Mediation Board's staff of mediators, has been appointed secretary of the Board, succeeding Robert F. Cole, who at his own request has been transferred to a senior mediator's position.

The announcement from Dr. William M. Leiserson, N. M. B. chairman, stated that Mr. Cole, who had been secretary for five years, sought the transfer because of "continuing eye fatigue resulting from extensive reading required in this position and the physical strain of performing the multitude of routine office work at his age." Mr. Cole, who was born December 16, 1883, at Kaufman, Tex., has been on the staffs of N. M. B. and its predecessor agencies since 1920.

Uniform Rate Bill

Another bill to carry out the legislative recommendations of the Board of Investigation and Research's report on inter-territorial freight rates has been introduced in the Senate by Senator Hill, Democrat of Alabama. It is S. 1124 "to amend the Interstate Commerce Act to provide for the establishment of a uniform classification and uniform scale of class rates for railroad freight. . ."

Recommends Permit for Universal Carloading

Examiner R. W. Snow has recommended in a proposed report that the Interstate Commerce Commission issue to the Universal Carloading & Distributing Company a permit under the Interstate Commerce Act's Part IV, authorizing continuance of freight-forwarding operations "between all points in the United States." The case is docketed as FF-43.

Trans-Missouri-Kansas Board Meeting

The Trans-Missouri-Kansas Shippers Board will hold its sixty-sixth regular meeting at Wichita, Kan., on June 9. Speakers will include Col. E. C. R. Lasher, deputy chief of transportation of the U. S. Army, whose subject will be Military Transportation; O. C. Castle, associate director of the Office of Defense Transportation; G. H. Shafer, president of the National Association of Shippers Advisory

Boards; Homer C. King, director of the Bureau of Service of the Interstate Commerce Commission, who will talk on the Commission's Car Service Work During Emergency; C. D. Sturtevant, special representative of the Commodity Credit Corporation, who will discuss the National Grain Situation; and F. S. Keiser, transportation consultant of the O.D.T.

Estimated Weight on Liquefied Petroleum Gas

Future application of the refined-oils group's estimated weight of 6.6 lb. per gallon to liquefied petroleum gas, in tank cars, from midcontinent oil fields to Southern territory has been found unreasonable by the Interstate Commerce Commission, Division 2, which has prescribed a reasonable estimated weight of 4.7 lb. per gallon. The decision in No. 28663 found that the application of the 6.6-lb. estimated weight was not unreasonable in the past, and thus there was no award of reparation.

Pacific Northwest Advisory Board Meeting

The Pacific Northwest Advisory Board will hold its regular meeting at Tacoma, Wash., on June 24. Speakers will include Joseph B. Eastman, director of the Office of Defense Transportation, and Fred Shaneman, manager of the Penn Salt Company, who will discuss the growth of the chemical industry in the Pacific Northwest.

April's Revenue Ton-Miles 18 Per Cent Above Last Year

Class I railroads handled about 18 per cent more ton-miles of revenue freight in April, 1943, than in April, 1942, according to a preliminary estimate prepared by the Association of American Railroads.

In the first four months of 1943, Class I roads performed 26 per cent more revenue ton-miles of service than in the same period of 1942. Compared with the first four months of 1939, the freight service performed in the first one-third of 1943 was 138 per cent greater.

The following table summarizes revenue ton-mile statistics for the first four months of 1943 and 1942.

Revenue Ton-Miles of Freight			
Month	1943	1942	Per cent Increase
2 Months	109,565,792,000	83,773,075,000	30.8
March	* 61,000,000,000	48,255,531,000	26.4
April	† 59,000,000,000	49,997,495,000	18.0
4 Months	229,565,792,000	182,026,101,000	26.1

* Revised estimate.

† Preliminary estimate.

War Labor Board Panel Picked for Puerto Rico Dispute

Giving effect to President Roosevelt's May 13 executive order, as reported in *Railway Age* of May 22, page 1066, the National War Labor Board on May 28 appointed a special three-member panel to render a decision for settlement of a dispute between the American Railroad of Puerto Rico and the Union of United Workers of the Railroad of Puerto Rico which led to a 47-hour strike that tied up the road's operations and resulted in the

President's order directing the Office of Defense Transportation to operate it.

The panel's decision will be final, subject to review by the NWLB. It consists of Justice Cecil Snyder of the Supreme Court of Puerto Rico, Frank Dorothy, general manager of the Bacardi Rum Corporation, and Benigno Fernandez Garcia, former attorney general and commissioner of labor of Puerto Rico. The principal issue in dispute, it was indicated by the NWLB announcement, was a union demand for a 25 per cent wage increase.

Petroleum Committee Issues Report on Oil to East

The Transportation committee for district two of the Petroleum Industry committee, which was appointed on July 24, 1941, has issued a summary of the steps taken by this district to aid in the movement of oil to the East. The report covers the transfer of large capacity tank cars to the eastern movement in exchange for smaller cars in district one, the establishment of schedules and routes, and the utilization of lake tankers, inland waterway barges and pipelines.

In summary the report states: "The various plans and recommendations of the Transportation committee and its subcommittees have been worked out through orders of the Petroleum Administration for War, the Office of Defense Transportation and through the action taken by operators in the petroleum industry and the transportation industries to the point that very material results are observable. Statistics are lacking as to the total quantities of petroleum and petroleum products which have become available to district one through these measures but there are numerous indications of the results. For instance, the number of tank cars made available for service into district one has increased progressively since institution of the committee's surveys. As of May 1, 1942, the number of tank cars in the service to district one was shown by a survey to be 50,000. By March 1, 1943, this number had increased to 71,180. There were 37,358 tank cars operating from origins in district two in December, 1941, exclusive of certain classifications. At this time several hundred cars had already been removed from service in district two and placed in service to district one. As of March, 1943, this number had been reduced to 13,181. The balance, 24,177 tank cars, had been made available for transportation of petroleum into district one. To this additional carrying capacity has been added the contributions made by barges, lake steamers and increases in the capacities of the pipelines leading to the East.

New Competition for Supply Companies After War

Competition after the war from excess war plants, which already have their eyes on the railway market, will seriously affect established railway supply companies in the post-war period unless they start now to formulate plans for the introduction of products into which recent technical developments will be incorporated, according

to A. E. Perlman, chief engineer of the Denver & Rio Grande Western, in an address before a meeting of the Western membership of the Railway Business Association at Chicago on May 27. Mr. Perlman emphasized the need for technical research in the railroad field and urged supply companies to study their products now rather than after the war. He cited a statement by Henry Kaiser to the effect that he will construct railway cars after the war and post-war plans of a number of companies that do not at present serve the railroad industry to show the need for research by the railroad supply companies. He also urged supply companies to cooperate with the central research organization which the Association of American Railroads is creating.

Nonmilitary Government Travel

Railroad travel expenses totaling \$6,379,630 were incurred during the last half of 1942 by various federal government departments and agencies for travel "of a nonmilitary nature," according to a report which Congress received on May 27 from its Joint Committee on Reduction of Nonessential Federal Expenditures. The "railroad expenses" item was 18 per cent of the \$35,672,853.84 figure for total travel expenses.

Per diem expense accounted for \$18,527,694 or 52 per cent of the total, while automobile expenses amounted to \$5,119,045 or 14 per cent, and airplane expenses to \$2,640,208 or seven per cent. The War Production Board's \$1,029,387 was the largest expenditure listed for railroad travel. Next in turn came the Department of Justice, \$637,164, and Department of Agriculture, \$543,326. Agriculture's outlay of \$1,459,329 headed the "automobile expense" list, while WPB's \$800,834 topped the "airplane expense" list. The Office of Defense Transportation was shown to

have spent \$61,018.64 on railroad travel, and \$14,367.36 on airplane travel.

The Interstate Commerce Commission spent \$60,685.25 for rail travel and \$1,439.76 for air travel. No expenditure for air travel was reported for the Railroad Retirement Board, National Mediation Board, or Board of Investigation and Research, their outlays for rail travel being, in turn, \$22,167.82, \$2,499.82, and \$517.20. Meanwhile the Civil Aeronautics Board spent \$2,465.01 for rail travel as compared with \$1,136.96 for air travel, while the figures for the National Advisory Committee for Aeronautics were \$16,264.69 for rail travel and \$4,065.86 for air travel.

Two Young Railroaders Get Bravery Awards

The Pennsylvania recently awarded medals to two of its young employees for extraordinary courage and daring in attempting to save human life. The presentations were made at a directors' meeting by President M. W. Clement to Paul W. Hargrave, 18 years of age, and Charles W. Harrison, 19. Mr. Hargrave, who is now a Corporal in the 491st Coast Artillery at Camp Stewart, Ga., is on furlough from his position of telegraph and signal helper on the Philadelphia terminal division. Mr. Harrison is a carpenter helper on the St. Louis division and is enrolled in the U. S. Army Enlisted Reserve.

Mr. Hargrave received his award for attempting to save the life of a passenger who jumped off a railroad bridge over the Schuylkill river, east of the 30th street station of the Pennsylvania in Philadelphia, on September 8, 1942. The passenger, well above average height and weighing about 170 lb., was brought ashore by Mr. Hargrave, who weighs about 135 lb. and is 5 ft. 3 in. A total of four dives was necessary before the passenger's body was



Photo Courtesy Philadelphia Evening Bulletin

Presenting the Medals to the Two Young Heroes

From left to right: Charles W. Harrison, Corporal Paul W. Hargrave and President M. W. Clement of the P. R. R., who made the presentation

brought ashore (three minutes after the first attempt.) Artificial respiration and other aid proved unsuccessful and physicians pronounced the man dead.

Charles W. Harrison saved an 84-year-old woman from death before an onrushing passenger train. While on his way to the station at Marshall, Ill., Mr. Harrison saw the elderly woman standing on the tracks looking in the opposite direction. Realizing that she was unaware of her danger, he jumped across the track just ahead of the speeding train when it was only about 100 ft. away and dragged the woman to safety. Neither she nor her rescuer were injured.

The heroic service medals were established by the railroad's board of directors in 1923, and are a tribute to employees for protecting life or preventing accidents under circumstances of great personal danger and beyond the call or requirement of duty. There have been 106 recipients of these medals in 20 years.

Representation of Employees

Organizations operating through the Railway Employees Department, American Federation of Labor, have been certified by the National Mediation Board as duly-designated Railway Labor Act representatives of machinists, boilermakers, blacksmiths, sheet metal workers, electrical workers, carmen, and railway shop laborers employed by the Utah Copper Company.

Constituent organizations of the A. F. of L. Railway Employees Department also won other recent cases involving employees of the Pittsburgh & West Virginia—the International Brotherhood of Electrical Workers getting itself designated as representative of electrical workers, their helpers and apprentices, and the Sheet Metal Workers International Association getting its representation certificate broadened to include additional sheet metal workers, their helpers and apprentices.

Likewise the A. F. of L.'s Brotherhood of Sleeping Car Porters has won the right to represent train porters of the Louisville & Nashville, having defeated the Congress of Industrial Organizations' United Transport Service Employees of America by a vote of 52 to 43. Meanwhile the latter has been designated as representative of the Pullman Company's laundry workers; and District 50 of the United Mine Workers of America has been certified as representative of maintenance of way employees of the Delray Connecting.

In other elections involving locomotive engineers and yardmen of the Delray, the Brotherhood of Locomotive Firemen & Enginemen and the Brotherhood of Railroad Trainmen, respectively retained their certificates, beating out District 50 by votes of 7 to 0 and 19 to 5. Likewise did the Order of Railway Conductors retain its right to represent Nashville, Chattanooga & St. Louis road conductors, defeating the challenging B. of R. T. by a vote of 109 to 81. Meanwhile, the B. of R. T. supplanted the Railroad Yardmasters of America as the representative of Sacramento Northern yardmasters, and

won the right to represent Virginian yardmasters. The R. Y. of A. has been designated representative of yardmasters employed by the Chicago Produce Terminal Company.

The American Railway Supervisors' Association, Inc., has been designated to represent mechanical department foremen or supervisors of mechanics employed by the Terminal Railroad Association of St. Louis; and the Carferry Workers Independent Union of the Great Lakes has retained the right to represent unlicensed marine personnel on Ann Arbor car ferries, having defeated the challenging Seafarers International Union of North America by a vote of 69 to 58.

Freight Car Loading

Carloading reports were so delayed by the Memorial Day holiday that the Association of American Railroads had not announced the total for the week ended May 29 when this issue went to press.

Loading of revenue freight for the week ended May 22 totaled 843,334 cars and the summary for that week, compiled by the Car Service Division, A.A.R., follows:

Revenue Freight Car Loadings			
For the Week Ended Saturday, May 22			
Districts	1943	1942	1941
Eastern	163,113	158,001	185,321
Allegheny	186,738	184,876	192,399
Pocahontas	56,992	55,605	58,261
Southern	121,393	125,018	122,711
Northwestern	129,743	137,429	134,695
Central Western	117,205	112,652	118,784
Southwestern	68,150	64,095	53,856
Total Western Districts	315,098	314,176	307,335
Total All Roads	843,334	837,676	866,027
Commodities			
Grain and grain products	42,941	34,412	40,130
Live stock	13,313	12,853	10,429
Coal	166,647	165,998	151,878
Coke	14,268	14,166	13,732
Forest products	44,587	48,410	41,718
Ore	83,989	87,205	76,601
Merchandise l.c.l.	96,811	96,293	162,254
Miscellaneous	380,778	378,339	369,285
May 22	843,334	837,676	866,027
May 15	848,522	839,054	860,802
May 8	816,551	839,286	837,149
May 1	788,783	858,911	794,299
April 24	794,194	861,357	721,627
Cumulative Total, 21 Weeks ..	16,093,358	16,882,125	15,538,892

In Canada.—Car loadings for the week ended May 22 totaled 67,276 compared with 66,199 for the previous week and 66,059 for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
May 22, 1943	67,276	37,426
May 15, 1943	66,199	38,581
May 8, 1943	66,637	38,268
May 23, 1942	66,059	32,315
Cumulative Totals for Canada:		
May 22, 1943	1,298,527	774,208
May 23, 1942	1,309,429	671,414
May 24, 1941	1,172,875	606,582

I. C. C. Examiner Finds Racial Discrimination Corrected

If the recommendation of Examiner Horace W. Johnson is adopted by the Interstate Commerce Commission, it will dismiss without an affirmative order the complaint of Elmer W. Henderson against the Southern, filed October 10, 1942, in

which the railroad was charged with refusal to furnish the complainant, a negro, with dining car accommodations equal to those furnished white passengers. The examiner's report suggested the commission should find that, while the accommodations furnished "were unjustly discriminatory and unduly prejudicial," this "unlawful situation has been corrected for the future."

The complainant's basic contention was that the steward refused to seat him "at a vacant seat at tables allegedly reserved for colored passengers at a time when those tables were partially occupied by white passengers," and refused to notify him when he could be served, as promised, before the diner was detached from the train. Describing the company's practice "commencing subsequent to this trip," the examiner remarks that "the record warrants the conclusion that the accommodations now furnished are substantially equal."

Railroad Coal Pile Grows

Stocks of bituminous coal held by Class I railroads on May 1 were equivalent to a 37-day supply, on the average, Solid Fuels Administrator Harold L. Ickes announced June 1. This figure compared with the 32-day stockpile reported on April 1, he pointed out. For coal consumers as a whole the May 1 stockpile was equivalent to a 49-day supply, he added, in contrast to a 45-day supply on April 1. Thus the railroads' supply showed a 15.6 per cent increase during the month, where the increase for all consumers combined was 8.9 per cent.

Figures for Class I roads in the different regions were tabulated as follows:

Region	Stocks on hand (tons) May 1	Per cent increase from April 1	Average days supply May 1
Eastern	3,242,636	9.8	39
Allegheny	2,798,948	6.9	32
Pocahontas	647,188	4.6	35
Southern	2,798,125	6.2	43
Northwestern	1,478,391	.3	37
Central Western	1,741,885	18.5	36
Southwestern	467,801	23.6	31
Total	13,174,974	8.4	37

Stocks of bituminous coal in storage on Great Lakes docks on May 1 this year totaled 2,435,217 tons, Mr. Ickes said, or a decrease of 45 per cent from the figure for the same date in 1942. This decline was attributed to heavier demand and to the late opening of the lake shipping season.

Senate Approves \$200,000 for Resources Board

The Senate on May 27 passed and sent to conference its version of the Independent Offices Appropriation Bill for the fiscal year ending June 30, 1944, providing \$200,000 for the National Resources Planning Board, \$350,000 for the Board of Investigation and Research created by the Transportation Act of 1940, \$8,912,000 for the Interstate Commerce Commission, and \$133,000,000 for the Public Roads Administration.

In voting \$200,000 for the Resources Board, the Senate adopted the proposal of its committee on appropriations after rejecting a motion offered by Senator

McKellar, Democrat of Tennessee, to raise the amount to \$534,422. The Board had sought \$1,400,000, the amount approved by the Bureau of the Budget; but the House version of the bill gave it nothing. The \$200,000 proposed by the Senate is to be used for the coordination of planning with State and local governments; and it is to constitute "the total amount to be available" to NRPB during fiscal 1944.

In the latter connection, Congress is making doubly sure, closing every door which NRPB might possibly enter to get additional funds. A recent bill continuing certain special funds of the President's carried a prohibition against using them to supplement appropriations of agencies like NRPB.

Like the Resources Board, the Board of Investigation and Research was excluded from the House version of the bill. Thus its Senate-approved \$350,000 is another matter to be ironed out in conference. For the I. C. C. the Senate version carries \$100,000 more than the House allowed; and it also paves the way for a return of I. C. C. salaries to the \$12,000 a year basis provided in the Interstate Commerce Act, removing the provision, carried for several years in appropriation bills, which limits such salaries to \$10,000 a year. The \$133,000,000 approved by the Senate for the Public Roads Administration is the amount carried in the House bill.

Railroads Operate 2,500 Troop Trains a Month

More than 2,500 special trains are operated by the railroads each month to move the nation's military forces and their equipment, according to M. J. Gormley, executive assistant to the president of the Association of American Railroads in an address before the Cleveland Traffic Club on May 24. These special trains, he said, require hundreds of locomotives, approximately 10,000 tourist cars, 5,600 coaches, 300 standard sleepers, 3,200 baggage cars, 6,200 flat cars, 500 box cars and 850 other cars, including hospital cars, express refrigerators, gondolas and stock cars.

In this war, Mr. Gormley said, the average number of moves made by an American soldier is considerably higher than it was in the first World War, and the average distance that each one travels is much greater. Today, he said, the average soldier makes between six and eight trips from the time of his induction until he embarks for overseas, as compared with three in the last war. The average move now is approximately 800 miles, he said.

Pointing out that although it takes all forms of transportation to meet the Nation's wartime needs, Mr. Gormley declared that the biggest part of the job, most essential part, is that done by the railroads. "If it were not for the network of rails that stretches from one end of the country to the other," he maintained, "it would be impossible for us to carry on an armed conflict of the intensity and scope of the present struggle."

Comparing the size and complexities of the transportation task in this war with

that in the last, Mr. Gormley commented:

"The American railroads had a big job to do in the first World War, and, in spite of the transportation difficulties of 1917, which were beyond their control, they did it exceedingly well. The job this time is much bigger and much more difficult, and requires not only more transportation, but also better transportation."

In providing this, Mr. Gormley continued, our railroads are carrying more than half again as much freight traffic and more than one-fourth more passenger traffic than in 1918. They are handling this greatly increased business, he said, "without congestion or delay of any consequence and with none of the distress of the first World War period."

The railroads have been able to do such a big job, Mr. Gormley explained, because of "wise planning, organization and co-operation between the railroads and those who use them."

As the war progresses, Mr. Gormley declared, traffic will continue to increase and the railroads will have to carry the heavier load without getting much in the way of additional equipment.

"This," Mr. Gormley concluded, "means that greater utilization will have to be gotten out of the present railroad plant. And that, in turn, means that the entire transportation team—not only the railroads, but the railroads, the shippers and receivers and the government—will have to do its full part. Freight cars will have to be made to do even more work than they did in record-breaking 1942, and locomotives will have to perform more transportation service."

"The job ahead will not be easy, and there may be times when our railroads will be strained to the limit. But I feel confident that with the co-operation of those who use the railroads and with the addition of the cars and locomotives they must have, our railroads will be able to take care of nation's transport demands."

Construction

WAR DEPARTMENT.—The U. S. Engineer Office, New York, has awarded a contract, amounting to less than \$50,000, to Charles F. Vachris, Inc., Brooklyn, N. Y., for the construction of rail facilities in New Jersey.

NEW YORK CENTRAL.—The Pennsylvania Public Utility Commission has approved the application of this road for authority to alter an existing crossing and to construct an additional track over the track and right-of-way of the Bessemer & Lake Erie at Erie, Pa. The cost of the improvement is estimated at \$11,100.

PENNSYLVANIA.—This road has been granted authority by the Pennsylvania Public Utility Commission for the alteration of two crossings northeast of the village of Transfer in Pymatuning Township, Mercer county, Pa., at a point where the main line of the Erie and the Ashtabula division of the Pennsylvania cross the state highway. Cost of the improvement is estimated at \$15,620, exclusive of property damage.

Supply Trade

Charles R. Hook, president of the American Rolling Mill Company, and Elisha Walker, partner in the firm of Kuhn, Loeb & Co., have been elected to the board of directors of the Westinghouse Electric & Manufacturing Co.

The Stewart-Warner Corporation, one of the first Chicago manufacturers of war material to receive the Army-Navy production award, has just received the "E" award for the second time "for meritorious services on the production front."

The Latrobe plant of the American Locomotive Company was awarded an Army-Navy "E" pennant on May 25. This is the second plant of the company to receive this production award. The Schenectady plant was similarly honored last August, and the Dunkirk plant received the Maritime "M" in December.

Walton L. Woody has been elected vice-president in charge of operations of the National Malleable & Steel Castings Co., with headquarters at Cleveland, Ohio. Mr. Woody was formerly assistant to the president in charge of the Sharon, Pa., and Melrose Park, Ill., works. He joined the company in 1914 following graduation from Rose Polytechnic Institute. He was instrumental in establishing its first chemical laboratory and in 1938 he was



Walton L. Woody

made manager of the Sharon works. Since then he has directed substantial expansion programs there and at the Melrose Park Works.

While under his direction, the Sharon Works was awarded the Maritime "M" pennant on August 31, 1942, and a star for the pennant on April 26, 1943.

The third submarine patrol vessel to be launched within a month by the Pullman-Standard Car Manufacturing Company slid down the ways on May 27. The ship was christened by Mrs. Armida Nosalik, a lathe operator in the company's shipbuilding division, who, a few minutes earlier had received the Purple Heart and the

Distinguished Flying Cross posthumously awarded her flyer-husband who was killed in the Solomons. Captain Wallace R. Dowd, supervisor of shipbuilding for the Chicago area spoke on behalf of the Navy, and Frank Baker of the company's purchasing department acted as master of ceremonies.

George L. Rieger has been appointed assistant general superintendent of the Ramapo Ajax Division of the **American Brake Shoe Company**, with headquar-



George L. Rieger

ters at 230 Park avenue, New York. Mr. Rieger was born in 1891. He joined the Ajax Forge Company in July, 1916, as a planer hand and a few years later he was transferred to the company's Chicago plant as assistant foreman. He was promoted to foreman in 1927 and was transferred to the Los Angeles plant. A year later he was transferred back to Chicago as general foreman.

Mr. Rieger was appointed superintendent of the Ramapo Ajax plant at Hillburn, N. Y., in 1940, serving in that capacity until his recent promotion.

James A. Smith, assistant superintendent of the **Copperweld Steel Co.**, Glassport, Pa., has been promoted to gen-



James A. Smith

eral superintendent of the plant. Mr. Smith joined the Copperweld organization in November, 1920, when the mill was lo-

cated at Rankin, Pa. He served as shipping foreman until 1932, when he became fabricating superintendent. In 1939 he became assistant superintendent, the position he held at the time of his recent promotion — which became effective on May 1. During the last world war Mr. Smith served for a time as instructor at Camp Lee, Va., later being assigned to special duty on the production of steel for aircraft.

Richard D. LaFond has been appointed director of public relations of **Sperry Products, Inc.**, Hoboken, N. J. Mr. LaFond will direct all advertising, publicity, and employee-morale activities for Sperry, in addition to inaugurating an enlarged program of customer-relations designed to make available the benefits of Sperry research and field application data to the railroad, marine and aviation industries.

Mr. LaFond, before joining Sperry Products, was sales promotion manager for the Dresser Manufacturing Co., of Bradford, Pa., and prior to that time he was in the industrial advertising section of the General Electric Co., at Schenectady, N. Y.

Equipment and Supplies

LOCOMOTIVES

THE PITTSBURGH & LAKE ERIE has purchased from the American Locomotive Company 25 switching locomotives of the 0-8-0 type, at a cost of approximately \$2,000,000.

THE BINGHAM & GARFIELD has placed an order for two Mallet type locomotives with the Baldwin Locomotive Works. These locomotives are duplicates of the 20 recently ordered by the B. & O. from the same builder.

SIGNALING

THE ATCHISON, TOPEKA & SANTA FE has placed orders with the Union Switch & Signal Co. covering the materials required for the installation of a centralized traffic control system on 42 miles of its Pecos division between Mountainair, N. M., and Belen. The style "C" control machine will be located at Mountainair to control the entire territory, with signals to be of the style H-5 searchlight type. Switch movements will be style M-22-A at locations where switching is involved, with style SL-21-A switch locks to be applied on the hand-throw main track switches. The sidings will be equipped with track circuits and signaled for movement in either direction, with telephone equipment supplied for controlled head block and switch lock locations. The field installation work will be carried out by the railway system's regular signal construction forces.

Abandonments

ATCHISON, TOPEKA & SANTA FE.—In a supplemental report in Finance Dockets 13772 and 13776 Examiner Jerome K. Lyle has, after further hearings, modified the recommendations of his previous report (see *Railway Age* of October 17, page 633) in that he does not now recommend that the commission authorize the abandonment of a segment of a branch between Virgil, Kans., and Madison Junction, about 10 miles. Unchanged are the proposals in the first report that abandonment of the segment from Virgil to Benedict Junction, about 30 miles, and from a point near Eureka, Kans., to Moline, about 34 miles, should be authorized, but abandonment from Madison Junction to Emporia Junction, about 23 miles, should not be authorized.

BALTIMORE & OHIO.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon operation of, and the Buffalo & Susquehanna to abandon, a 44.46-mile segment of the latter's main line from a point near Sinnemahoning, Pa., to a point near Burrows, together with a 9-mile branch from Wharton, Pa., to Austin, neither of which has been regularly operated since they were damaged by flood in July, 1942, subject to certain conditions for the protection of employees possibly affected.

CENTRAL VERMONT.—Division 4 of the Interstate Commerce Commission has denied this road's application for authority to abandon a branch from Barre Junction, Vt., to South Barre, 3.48 miles, on the ground that the record does not indicate that continued operation will impose an undue burden.

CHESAPEAKE & OHIO.—Division 4 of the Interstate Commerce Commission has approved this company's application for authority to abandon a branch from Fork Junction, W. Va., to Alkol, 1.99 miles.

PENNSYLVANIA.—The Interstate Commerce Commission, by Commissioner Porter, has extended to June 20 the effective date of its order authorizing this road and the Pennsylvania, Ohio & Detroit to abandon operation of and to abandon, respectively, a line from Loudonville, Ohio, to Brinkhaven, about 17 miles.

MISSOURI PACIFIC.—The Missouri Pacific in Nebraska has applied to the Interstate Commerce Commission for authority to abandon its line from Crete, Neb., to a point near Auburn, about 70 miles.

NEW YORK CENTRAL.—Upon the request of the federal district court the Interstate Commerce Commission, by Commissioner Porter, has extended to June 12 the effective date of its order authorizing this road to abandon its branch from Van Cortlandt Park Junction, N. Y., to Getty Square, Yonkers, 3.1 miles, in order that the court may proceed with its consideration of petitions filed with it by the Public Service Commission of New York and others for an injunction to stop the abandonment pending adjudication of the case.

Financial

issue under consideration at this time, the dissent continued, and had marketed certificates for the balance at the same interest rate as the average rate of recent issues approved by the commission, that is, 2.03 per cent, it would have saved about \$252,800, or almost 3.6 per cent on the initial cash payment, in interest charges during the life of the certificates. The proposed debt retirement program "can in no way justify the unnecessarily expensive financing here proposed," Mr. Porter said, because the retirement has been made and "any savings resulting therefrom already have been achieved."

BANGOR & AROOSTOOK.—Authentication of Bonds.—This company has applied to the Interstate Commerce Commission for authority to procure authentication and delivery of an additional \$40,000 of its consolidated refunding mortgage 4 per cent bonds to be pledged as collateral in place of certain matured securities.

DELAWARE, LACKAWANNA & WESTERN.—Dissolution of Subsidiary.—This company has applied to the Interstate Commerce Commission for authority to dissolve its wholly owned subsidiary, the Hopatcong, transferring to itself title to that company's property.

ILLINOIS CENTRAL.—Annual Report.—The 1942 annual statement of this road shows a net income, after interest and other charges, of \$24,914,091, as compared with a net income of \$10,557,195 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Average mileage operated	6,433.47	-83.45
RAILWAY OPERATING REVENUES	\$213,026,422	+\$70,588,096
Maintenance of way and structures	28,820,890	+13,426,101
Maintenance of equipment	39,800,408	+10,446,209
Transportation	61,317,476	+12,365,424
TOTAL OPERATING EXPENSES	139,481,368	+37,752,303
Operating ratio	65.48	-5.94
NET REVENUE FROM OPERATIONS	73,545,053	+32,835,793
Total taxes	26,580,212	+13,113,221
RAILWAY OPERATING INCOME	46,964,842	+19,722,573
Hire of equipment—Balance Dr.	5,957,986	+4,446,984
Joint facility rents	1,809,915	+566,905
NET RAILWAY OPERATING INCOME	41,007,920	+14,995,507
Other income	1,408,289	+578,031
TOTAL INCOME	42,416,210	+15,573,537
Rent for leased roads and equipment	1,070,432	+485,853
Interest on funded debt	14,549,177	-496,876
TOTAL DEDUCTIONS FROM GROSS INCOME	17,502,119	+1,216,641
NET INCOME	24,914,091	+14,356,896
Disposition of net income: Income applied to sinking funds	140,700	+9,514
Balance, transferred to profit and loss	\$24,773,391	+\$14,347,382

KANSAS CITY SOUTHERN.—Promissory Notes.—Division 4 of the Interstate Commerce Commission has authorized this

company to issue \$1,179,806 of promissory notes in evidence of, but not in payment for, the unpaid principal on certain equipment contracts. In its report the division again called attention to its warning, reported in *Railway Age* of March 13, page 535, and March 20, page 602, that such transactions with respect to equipment contracts entered into subsequent to January 1 of this year would not be approved.

MISSOURI-KANSAS-TEXAS.—Annual Report.—The 1942 annual statement for this road shows a net income, after interest and other charges, of \$5,880,546, as compared with a net deficit of \$645,526 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Average mileage operated	3,293.31	.....
RAILWAY OPERATING REVENUES	\$58,626,219	+\$23,704,449
Maintenance of way and structures	10,858,505	+6,052,276
Maintenance of equipment	8,332,386	+2,541,209
Transportation	17,271,544	+4,984,199
TOTAL OPERATING EXPENSES	39,990,824	+14,203,501
Operating ratio	68.21	-5.63
NET REVENUE FROM OPERATIONS	18,635,395	+9,500,948
Railway tax accruals	4,065,898	+1,515,317
RAILWAY OPERATING INCOME	14,569,497	+7,985,631
Net rents—Dr.	4,098,014	+1,483,833
NET RAILWAY OPERATING INCOME	10,471,483	+6,501,798
Total other income	460,527	-65,748
TOTAL INCOME	10,932,011	+6,436,050
Rent for leased roads and equipment	23,688	-3,025
Interest on funded debt		
—Fixed interest	4,278,781	-61,045
TOTAL FIXED CHARGES	4,306,958	-85,152
NET INCOME	\$5,880,546	+\$6,526,072

PENNSYLVANIA.—Dividend.—The board of directors of this road have declared a 2 per cent (\$1.00 per share) dividend on capital stock, payable on and after June 29 to stockholders of record June 5.

PENNSYLVANIA.—New Director.—Richard D. Wood, president of the Millville Manufacturing Co., and a member of the firm of George Wood, Sons & Co., of Philadelphia, Pa., has been elected a director of this road to succeed the late George Stuart Patterson.

OAKLAND TERMINAL.—New Company Formed.—Division 4 of the Interstate Commerce Commission has approved the formation of the Oakland Terminal Railway Company with a capitalization of \$225,000 of common stock, to be owned jointly by the Atchison, Topeka & Santa Fe and Western Pacific. Approval also has been given for this new company to purchase certain property in Oakland, Calif., of the Oakland Terminal Railroad Company, to acquire trackage rights over the remaining lines of that company, to sublease certain trackage from the A. T. & S. F., and to construct certain connections and

BALTIMORE & OHIO.—Equipment Trust.—Pointing out that this road is engaged in a continuing debt reduction program, Division 4 of the Interstate Commerce Commission, with Commissioner Porter dissenting, has authorized it to assume liability for \$3,500,000 of a proposed \$10,760,000 issue of Series M 3 per cent equipment trust certificates, sold at 100.125 to Halsey, Stuart & Company and others. The purposes of the issue were outlined in *Railway Age* of May 15, page 973. Equipment on which early delivery is expected includes two 5400 h.p. Diesel-electric freight locomotives, six 1000 h.p. Diesel-electric switching locomotives, and 750 composite (50-ton) hopper cars, at a total cost of \$3,521,080, so that substantially the entire cost of the equipment will be met through sale of these certificates.

In explanation of its proposal to purchase this equipment "without making the customary down payment," the division said, the B. & O. informed the commission that with the cash that would be required for the ordinary 20 per cent down payment, that is, approximately \$2,000,000, it expected to purchase and retire \$4,772,000 of its refunding and general mortgage series F bonds, selling in the market at a discount, and so effect an annual reduction in fixed charges of \$238,600, or \$2,386,000 during the 10-year life of the equipment trust certificates. After deducting the dividends payable on the certificates, the net saving to the company over that period would be \$1,797,500, the commission was informed, and the reduction in interest charges would still continue to the maturity date of the retired bonds, 1996.

The division's report pointed out that the road had retired in the past 2 years \$18,558,255 of indebtedness, and already in 1943 had, through its subsidiary, the New York Transit & Terminal Company, accepted tenders for \$68,759,350 principal amount of various security issues, of which at least \$25,000,000 principal amount is expected to be retired this year. "In view of this continued reduction of debt" the division's majority, Commissioners Mahaffie and Miller, approved the application.

Terming the transaction "the type of financing to which I cannot give my approval," Commissioner Porter in his dissent contended that a precedent had been established, in approving an equipment trust issue equal in amount to cost of the equipment, which in time, if the practice should become general, would greatly impair the favored investment position now enjoyed by this type of security. As an indication of this trend, he pointed out that only one banking house submitted a bid on the issue in question out of 29 to whom invitations were extended, and that the annual cost to the road, 2.98 per cent, was the highest borne by any equipment trust issue recently considered by the commission.

If the road had made a 20 per cent cash payment in connection with the part of the

crossovers, all designed to improve the service of the proprietary roads to facilities in the Oakland outer harbor district which heretofore they had access to only via the old terminal company, a Key System property.

SAN LUIS CENTRAL.—*Extension of Bond Maturity.*—This road has applied to the Interstate Commerce Commission for authority to arrange for a 20-year extension to July 1, 1963, of the date of maturity of \$120,000 of first mortgage 6 per cent gold bonds.

Average Prices Stocks and Bonds

	June 1	Last week	Last year
Average price of 20 representative railway stocks..	38.41	38.31	24.12
Average price of 20 representative railway bonds..	79.00	78.42	64.88

Dividends Declared

Atchison, Topeka & Santa Fe.—5 Per Cent Non-Cumulative Preferred, \$2.50, semi-annually, payable August 2 to holders of record June 25.

Atlanta, Birmingham & Coast.—5 Per Cent Preferred, \$2.50, semi-annually, payable July 1 to holders of record June 11.

Beech Creek.—50¢, quarterly, payable July 1 to holders of record June 15.

Boston & Albany.—\$2.50, payable June 30 to holders of record May 29.

Chicago Great Western.—Preferred, \$1.25, payable June 30 to holders of record June 16.

Cincinnati, New Orleans & Texas Pacific.—\$4.00, payable June 24 to holders of record June 8.

Culver & Port Clinton.—10¢, semi-annually, payable August 16 to holders of record July 22; Extra, 10¢, payable May 29 to holders of record May 19, and November 29 to holders of record November 19.

Detroit, Hillsdale & South Western.—\$2.00, semi-annually, payable July 5 to holders of record June 19.

Erie & Pittsburgh.—7 Per Cent Gt., 80¢, quarterly, payable June 10 to holders of record May 29.

Illinois Central.—Leased Lines, 4 Per Cent Guaranteed, \$2.00, semi-annually, payable July 1 to holders of record June 11.

Kansas, Oklahoma & Gulf.—Pf. A and Pf. B, both \$3.00, semi-annually, payable June 1 to holders of record May 27.

New York & Harlem.—Common and 10 Per Cent Preferred, both \$2.50, payable July 1 to holders of record June 15.

North Pennsylvania.—\$1.00, quarterly, payable June 10 to holders of record June 3.

Pennsylvania.—\$1.00, irregular, payable June 29 to holders of record June 5.

Pittsburgh & Lake Erie.—Irregular, \$2.50, payable June 15 to holders of record May 21.

Pittsburgh, Fort Wayne & Chicago.—Preferred, \$1.75, quarterly, payable July 6 to holders of record June 10; \$1.75, quarterly, payable July 1 to holders of record June 10.

Reading.—Second Preferred, 50¢, quarterly, payable July 8 to holders of record June 17.

TRADE PUBLICATIONS

LINK-BELT SPEEDER CATALOG.—A 24-page catalog, No. 1960, has been published by the Link-Belt Speeder Corporation, Chicago, describing its two to three-yard Speed-O-Matic, Series 500, cranes, draglines and shovels. The catalog describes in detail the design and construction features of the machines and eight pages are devoted to dimensions, clearance diagrams, working ranges, lifting capacities and brief specifications. It is attractively printed in color and contains numerous illustrations.

ROLLING STOCK FOR TURKEY.—18 locomotives and 520 freight cars have been delivered to Turkey from the United Kingdom since April, 1940, according to a report published in a recent issue of the Foreign Commerce Weekly.

Railway Officers

FINANCIAL, LEGAL AND ACCOUNTING

Fred W. Bower, general claims agent of the Southern Pacific, with headquarters at San Francisco, Cal., has retired after 44 years in railroad service. Mr. Bower was born near Junction City, Kan., on April 15, 1873, and entered railway service as a clerk of the Union Pacific, subsequently serving as stenographer, brakeman and conductor until 1908 when he was appointed claims adjuster and later served as claim agent in Kansas, Wyoming and Utah. In 1913 Mr. Bower was appointed claims adjuster of the Oregon Short Line (part of the Union Pacific), with headquarters at Salt Lake City, Utah, and five years later he became claims agent of the Southern Pacific. In 1920 he was advanced to assistant to the claims attorney and in 1933 he was promoted to the position he held at the time of his retirement.

Elmer Hart, whose appointment as general auditor of the Pennsylvania at Philadelphia, Pa., was announced in the *Railway Age* of May 22, was born on October 25, 1883, at Philadelphia and entered railroad service in May, 1900, as junior clerk in the accounting department of the Pennsylvania. While employed in this position, Mr. Hart attended the Evening School of Finance and Accounts of the University of Pennsylvania. He served in various clerical capacities until November, 1910, when he was appointed acting inspector of accounts. In August, 1912, he was advanced to the position of inspector of accounts and in December, 1918, he was appointed special agent on the staff



Elmer Hart

of the assistant comptroller. At the conclusion of the period of federal control of the railroads, Mr. Hart was assigned to special duties in the office of the comptroller, and on April 1, 1926, he was appointed chief special agent, accounting department. He was appointed assistant to the comptroller in March, 1927, and in December of the same year was promoted

to assistant comptroller. Mr. Hart was appointed deputy comptroller in 1929, and remained in that position until his recent promotion.

Paul Drewry Fox, whose appointment as deputy comptroller of the Pennsylvania, with headquarters at Philadelphia, Pa., was announced in the *Railway Age* of May 22, was born on October 8, 1908, at Rich-



Paul Drewry Fox

mond, Va., and received a B.S. degree in civil engineering from the Virginia Military Institute, Lexington, Va., in 1930, later attending the University of Pennsylvania for post-graduate work in accounting. Mr. Fox entered the service of the Pennsylvania on July 14, 1930, as assistant in the engineering corps in the maintenance of way department, Maryland division, with headquarters at Wilmington, Del. He served in that capacity on the Williamsport, Philadelphia and Atlantic divisions until May, 1932, at which time he was furloughed because of a reduction in personnel. He then entered the retail sales department of the Standard Oil Company of New Jersey. He returned to the service of the Pennsylvania on April 22, 1934, thereafter serving as assistant supervisor of track successively on the Philadelphia division at Harrisburg, Pa., and the Tyrone, Altoona and Middle divisions. On November 1, 1935, he was assigned to special duty in the office of the vice-president and comptroller, and on January 16, 1937, he was appointed supervisor of track at Warren, Pa., returning to the vice-president and comptroller's department in October of the same year. On January 15, 1939, Mr. Fox was appointed assistant to the comptroller and on October 1, 1941, he was appointed auditor of disbursements, the position he was holding at the time of his recent appointment as deputy comptroller.

I. Foster Murphy, whose appointment as auditor of disbursements of the Pennsylvania, with headquarters at Philadelphia, Pa., was announced in the *Railway Age* of May 22, was born on September 18, 1892, at Philadelphia. Mr. Murphy entered the service of the Pennsylvania

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as a junior clerk in the office of the auditor merchandise freight receipts (auditor freight traffic) on May 10, 1909. He was transferred to the office of the assistant comptroller-corporate, on July 24, 1919, and served in that office during the period of federal control of railroads. Following federal control, he was transferred to the office of the comptroller, where he served in various capacities until November 16, 1928, when he



I. Foster Murphy

was appointed special agent to comptroller. On August 1, 1929, Mr. Murphy resigned from the Pennsylvania and entered the service of the National Freight Company (later known as the National Carloading Corporation) as general auditor, from which position he resigned on July 31, 1933, to re-enter the service of the Pennsylvania as special agent to comptroller. He was appointed assistant chief of the contract bureau on April 1, 1937, and on September 19, 1941, he became assistant chief traveling auditor. Mr. Murphy was appointed assistant auditor of disbursements on December 1, 1941, and remained in that position until the time of his recent promotion.

Henry W. Oppenheimer has been appointed assistant general attorney of the Chesapeake & Ohio, with headquarters at Richmond, Va.

Clive C. Handy, general attorney of the New York Central, with headquarters at New York, has retired in accordance with pension regulations. He will be succeeded by **Frederick L. Wheeler**, formerly principal assistant general attorney at New York. **Paul Folger**, who has been serving as local counsel of the New York Central at Rochester, N. Y., will succeed Mr. Wheeler. Mr. Handy was born on May 31, 1873, at Wauseon, Ohio. He represented the Lake Shore & Michigan Southern (now part of the New York Central) as its local attorney at Wauseon for a number of years, and his work there attracted the attention of the law officers of the Lake Shore (part of the New York Central), who appointed him assistant general attorney at Cleveland, Ohio, in 1910. Mr. Handy was appointed general attorney at Cleveland in 1929, and in 1930

he became general attorney, Buffalo and East division, with headquarters at New York.

Kenneth Shealy, whose appointment as comptroller of the Atlanta & St. Andrews Bay at Dothan, Ala., was announced in the *Railway Age* of May 29, was born on February 24, 1892, at Cordele, Ga., and was educated at LaSalle Extension university. Mr. Shealy entered railroad service on September 1, 1908, as an employee of the Macon, Dublin & Savannah. On September 1, 1909, he became stenographer in the traffic department of the Central of Georgia at Macon, Ga. He remained in the employ of the Central of Georgia, and served successively from September 1, 1910, to September 15, 1934, as chief clerk, roadway department; accountant; division accountant; traveling auditor, and chief traveling auditor at Macon, and chief clerk to the auditor of disbursements at Savannah, Ga. On the latter date Mr. Shealy became auditor of the Atlanta & St. Andrews Bay, and on May 12, 1937, he was advanced to auditor-treasurer, the position he was holding at the time of his recent promotion. He will continue to serve also as treasurer of the road.

OPERATING

S. M. Percival, assistant superintendent of the High Point, Randleman, Ashboro & Southern and the Yadkin at Albermarle, N. C., has been commissioned a captain in the United States Army, to serve with the Military Railway Service Headquarters Company of the Southern Railway Battalion at Fort Slocum, New York.

F. A. Pouliot, whose appointment as superintendent of the Laurentian division of the Canadian Pacific at Montreal, Que., was announced in the *Railway Age* of May 22 entered the service of the Canadian Pacific in 1911 as a stenographer at Farnham, Que. Subsequently, in 1916,



F. A. Pouliot

he was promoted to telegraph operator, and in 1918, he was appointed train dispatcher. In 1937 he became chief train dispatcher of the Laurentian division at Montreal, and in 1940 he became supervisor of transportation at North Bay,

Ont. Mr. Pouliot has also seen service as acting superintendent at Woodstock, N. B., and at the time of his recent appointment as superintendent of the Laurentian division, he was serving as assistant to the general superintendent at Montreal.

H. M. Peterson has been appointed trainmaster of the Nevada Northern, with headquarters at East Ely, Nev.

D. F. Quiett, assistant trainmaster of the Illinois Central at Fulton, Ky., has been promoted to trainmaster of the Jackson and Water Valley districts, with headquarters at Jackson, Tenn., succeeding **W. K. McKay**, who has been granted a leave of absence on account of illness.

George W. Marriott, assistant to the vice-president and general manager of the Missouri Pacific Transportation Company (motor transport subsidiary of the Missouri Pacific), has been promoted to assistant general manager, with headquarters at St. Louis, Mo.

C. S. Neal, trainmaster of the Gulf, Colorado & Santa Fe at Temple, Tex., has been promoted to superintendent of the Gulf division with headquarters at Galveston, Tex., succeeding **O. H. Osborn**, who has been transferred to the Northern division, with headquarters at Fort Worth, Tex., replacing **E. E. Taylor**, who has retired. **W. A. J. Carter**, trainmaster at Brownwood, Tex., has been transferred to Temple, succeeding Mr. Neal, and **E. E. Baker**, trainmaster at Galveston, has been transferred to Brownwood, replacing Mr. Carter.

Clyde W. Pace, superintendent of the Eastern and Kansas City Terminal divisions of the Missouri Pacific, who has been on leave of absence to serve with the Office of Defense Transportation, has returned to the road and has been promoted to assistant general superintendent of transportation with headquarters at St. Louis, Mo. He succeeds **R. J. McDermott**, whose promotion to vice-president and general manager of the Missouri Pacific Transportation Company (motor transport subsidiary of the Missouri Pacific), was reported in the *Railway Age* of May 15.

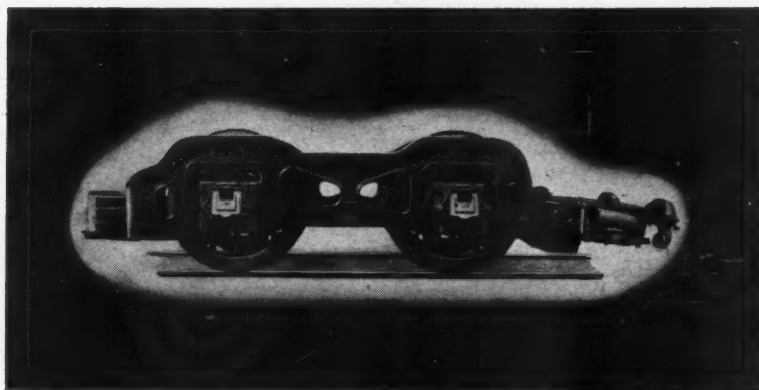
TRAFFIC

William E. Boyer, district freight agent of the Pennsylvania, with headquarters at Dayton, Ohio, has retired after 52 years of service.

J. T. Bate, assistant traffic manager of the Pacific Coast agencies of the Missouri-Kansas-Texas, at Los Angeles, Cal., has been appointed special traffic representative, with the same headquarters. The position of assistant traffic manager has been abolished.

James Thomas Carbine, whose appointment as general traffic manager-coal of the Pennsylvania, with headquarters at Philadelphia, Pa., was announced in the *Railway Age* of May 22, was born on August 27, 1890, at Fernwood, Pa., and

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was educated at Drexel Institute, Philadelphia. Mr. Carbine entered railroad service in 1906 as an employee in the office of the secretary of the Pennsylvania at Philadelphia. In 1909 he was transferred



James T. Carbine

to the office of the general coal freight agent, where he served in various capacities until September 1, 1919, at which time he was appointed assistant chief clerk. On June 1, 1922, he was appointed coal freight agent at Philadelphia, and on January 1, 1926, he was promoted to coal traffic manager at Pittsburgh, Pa., becoming assistant general traffic manager at Philadelphia on October 16, 1927. Mr. Carbine was appointed assistant general traffic manager-freight on July 1, 1929, holding this position until July, 1932, when he became coal traffic manager at Philadelphia, the position he had at the time of his recent promotion.

Edward T. Parks, whose promotion to general freight agent of the Chicago, Burlington & Quincy, with headquarters at Chicago, was reported in the *Railway Age* of May 29, was born at Cuba, Ill., on January 5, 1895, and graduated from the



Edward T. Parks

Chicago-Kent College of Law in 1923. He entered railway service in May, 1916, in the office of the auditor of freight accounts of the Burlington, and during World War I he served with the U. S.

Navy. In August, 1919, Mr. Parks returned to the Burlington, subsequently serving as tariff and divisions clerk and chief clerk, divisions bureau. In October, 1936, he was promoted to assistant general freight agent in charge of the divisions bureau, and in April, 1939, he was appointed assistant freight agent in charge of rates, with headquarters at Omaha, Neb., holding that position until his new promotion, effective May 17.

Fred Carpi, whose appointment as assistant general traffic manager of the Pennsylvania at Philadelphia, Pa., was announced in the *Railway Age* of May 22, was born on May 30, 1900, at Charleroi, Pa. Mr. Carpi entered the service of the Pennsylvania on January 15, 1917, as a clerk in the office of the agent at Donora, Pa. He had obtained limited business experience prior to that time, having been employed during school vacations in the years 1912 to 1916, inclusive. After serving in several capacities at the agencies at Donora, Shire Oaks Scales and 30th street, Pittsburgh, Mr. Carpi was trans-



Fred Carpi

ferred to the office of the division freight agent at Pittsburgh, and from there to the office of the general freight agent, Pittsburgh, being promoted to chief rate clerk of the rate bureau on April 1, 1927. He was appointed division freight agent at Wheeling, W. Va., on May 1, 1929, and became assistant general freight agent at Philadelphia, on January 16, 1931. On August 1, 1931, he was appointed traffic engineer at Philadelphia, and on June 1, 1932, he returned to his former position as assistant general freight agent at Philadelphia. Mr. Carpi was appointed general freight agent at Philadelphia on November 1, 1934, and on June 16, 1940, he was promoted to assistant to general traffic manager, the position he was holding at the time of his recent promotion.

Robert Halliday Miller, whose appointment as freight traffic manager of the Pennsylvania at Pittsburgh, Pa., was announced in the *Railway Age* of May 22, was born on September 2, 1884, at Mt. Gilead, Ohio. Mr. Miller entered railroad service in February, 1904, as office boy

and record clerk of the Cleveland, Akron & Columbus (now Pennsylvania) at Columbus, Ohio. In 1912, after serving in various clerical capacities, he was appointed assistant chief clerk at Columbus. In



Robert H. Miller

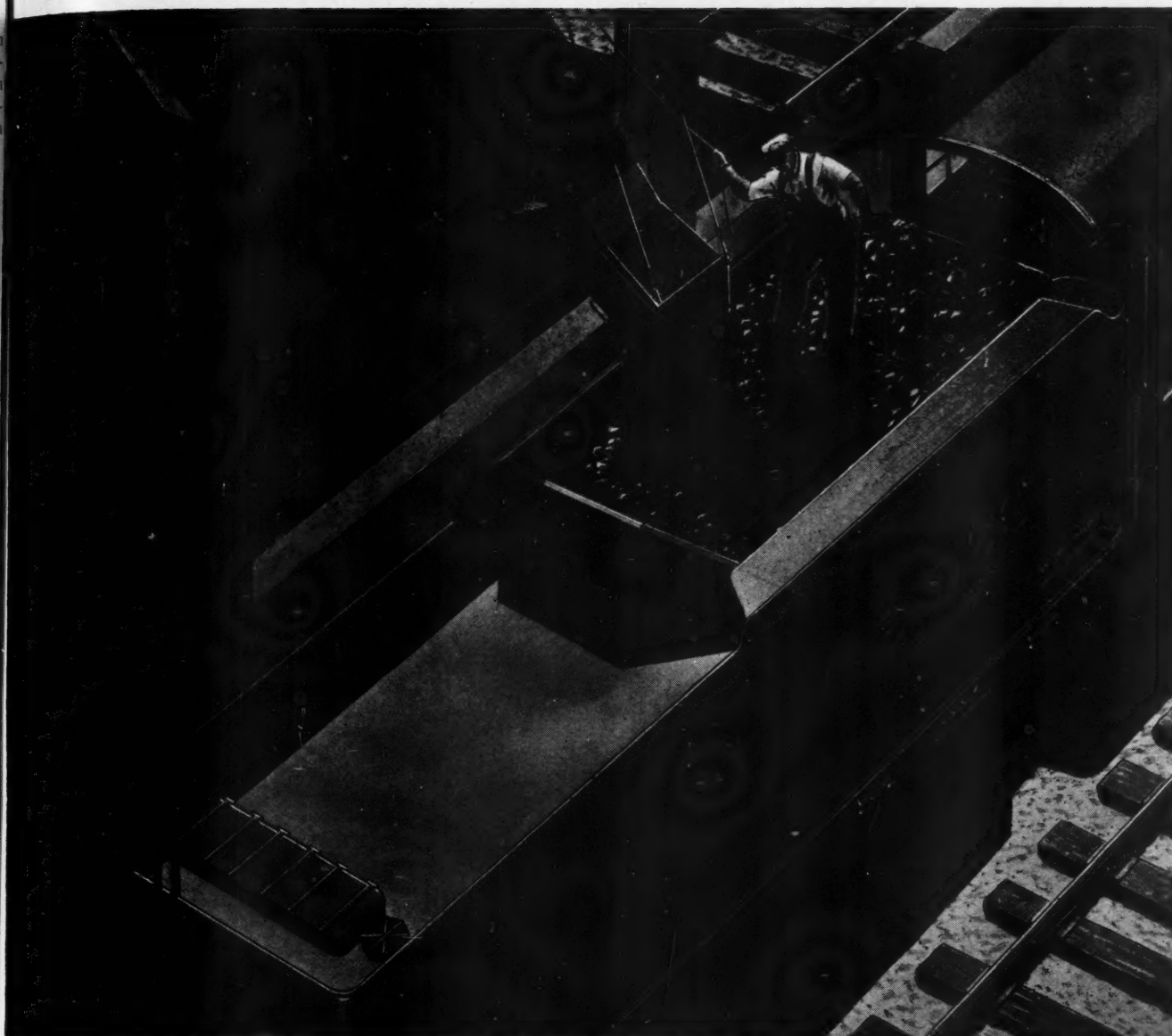
1916 he left the employ of the Cleveland, Akron & Columbus to become freight solicitor of the Union Line at Columbus, and in 1917 he became assistant chief clerk in the general freight office of the Pennsylvania at Pittsburgh, becoming chief clerk in the office of the assistant freight traffic manager, also at Pittsburgh in 1920. In 1921 Mr. Miller was transferred to the office of the freight traffic manager at Pittsburgh, and in 1924 he was again transferred, this time to the office of the traffic manager at Pittsburgh. He was advanced to district freight representative at Pittsburgh in 1925, and in 1926 he became division freight agent at Detroit, Mich. In 1927 he was promoted to assistant general freight agent at Pittsburgh. He became general freight agent of the Pennsylvania at Pittsburgh in 1929 and in 1932 he returned to his former position of assistant general freight agent at Pittsburgh. Mr. Miller was promoted to general freight agent at Pittsburgh in February, 1934, and remained in that position until the time of his recent promotion.

ENGINEERING & SIGNALING

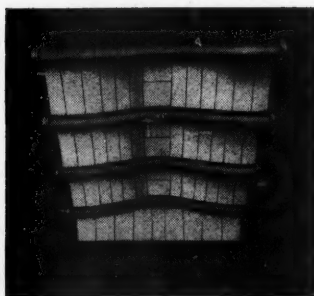
Hobart Rawson, consulting engineer of the Long Island has retired after more than 30 years of service in the employ of that road.

Harry Leard has been appointed engineer maintenance of way of the Virginian with headquarters at Roanoke, Va., effective June 1. The position of assistant to general manager formerly held by Mr. Leard has been abolished.

P. P. Wagner, division engineer of the St. Louis Terminal and Illinois divisions, has been appointed engineering assistant to the chief executive of the Missouri Pacific, with headquarters at St. Louis, Mo., succeeding **William H. Hobbs**, whose promotion to director of research was reported in the *Railway Age* of May 1. **H. H. Gudger**, roadmaster of the Colorado division, has been advanced to division engineer, with headquarters at Poplar



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Bluff, Mo., replacing **H. M. Noel**, who has been transferred to the St. Louis Terminal and Illinois divisions, succeeding Mr. Wagner.

H. D. Knecht, division engineer of the Kansas City Terminal and Eastern divisions of the Missouri Pacific, has been promoted to transportation engineer, research bureau, with headquarters at St. Louis, Mo., a newly-created position.

Karl Hanson, signal supervisor of the Atchison, Topeka & Santa Fe at Newton, Kan., has been promoted to assistant signal engineer of the Southern district, Western Lines, with headquarters at Amarillo, Tex., succeeding **Robert B. McKithan**, assigned to other duties at his own request.

T. O. Manion, roadmaster of the Missouri Pacific at El Dorado, Ark., has been promoted to division engineer of the Arkansas division, with headquarters at Little Rock, Ark., succeeding **C. J. Jaeschke**, who has been transferred to the Eastern and Kansas City Terminal divisions, replacing **H. D. Knecht**, whose promotion to transportation engineer of the research bureau is reported elsewhere in this issue.

SPECIAL

John Russel Kimpton, whose appointment as assistant manager, department of personnel of the Canadian Pacific, with headquarters at Montreal, Que., was announced in the *Railway Age* of May 29 entered the service of the Canadian Pacific in 1913 as a clerk in the office of the superintendent at Montreal. Subsequently he served successively as stenographer, general clerk and assistant accountant until 1923, when he was sent to the office of the general manager at Montreal. In



John Russel Kimpton

1926 he was appointed statistician, and in 1931 became chief clerk in the personnel department. He held this position until 1937 when he became assistant superintendent of the Bruce division, with headquarters at Toronto, Ont. After several years of service there, he became operating superintendent of the Woodstock division, and later, superintendent of the Laurentian division, the position he held

at the time of his recent appointment as assistant manager, department of personnel.

Cecil L. Butler, whose promotion to traffic assistant, research bureau, of the Missouri Pacific, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of May 29, was born at Lovelady, Tex., on August 15, 1898, and entered railway service on April 17, 1920, as a clerk in the local freight office of the International Great Northern (part of the Missouri Pacific system) at Palestine, Tex. On January 15, 1923, he was trans-



Cecil L. Butler

ferred to the freight claim department at Palestine as claim investigator and on April 7, 1924, he was appointed rate clerk. On January 1, 1928, he was transferred to Houston, Tex., and on July 1, 1932, to St. Louis, Mo. Mr. Butler was promoted to assistant general freight agent at St. Louis on April 16, 1934, and in October, 1941, he was advanced to general freight agent holding that position until his new appointment, effective May 15.

OBITUARY

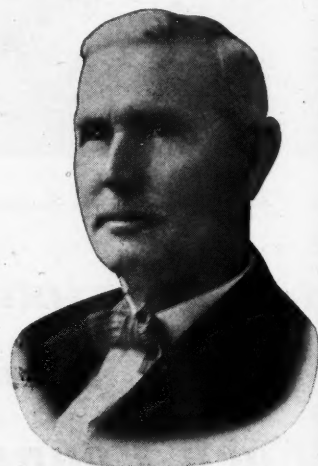
Henry M. DeGette, who retired in 1940 as freight claim agent of the Elgin, Joliet & Eastern, with headquarters at Chicago, died on May 31 at his home in Evanston, Ill. Mr. DeGette was born at Mills Corner, N. Y., on December 2, 1870, and entered railway service in 1890 with the Chicago, Burlington & Quincy, serving in various positions in the local freight office at Chicago until 1898, when he resigned to become an agent for the New York Life Insurance Company. A year later, he returned to the Burlington as a freight claim investigator and on October 1, 1900, he went with the E. J. & E., as a voucher clerk and investigator in the claim department. In 1907, Mr. DeGette was promoted to chief clerk in the claim department, and on October 15, 1909, he was advanced to freight claim agent, the position he held until his retirement.

John L. Downs, retired superintendent of the Illinois division of the Illinois Central, whose death on May 17 at Champaign, Ill., was reported in the *Railway Age* of May 29, was born at Greencastle, Ind., on August 20, 1870, and entered the service

of the Illinois Central on August 1, 1896, as a section foreman at Kankakee, Ill. On March 1, 1897, he was promoted to track supervisor at Pana, Ill., and later served in that capacity at Kankakee and Rantoul, Ill. On April 1, 1902, he was promoted to roadmaster at Fort Dodge, Iowa, and two years later he was transferred to Vicksburg, Miss. On September 1, 1911, he was transferred to Memphis, Tenn., and eight years later he was transferred to Champaign. Mr. Downs was advanced to district engineer of the Northern lines, with headquarters at Chicago, on February 1, 1925, and on October 1, 1929, he was promoted to superintendent of the Illinois division, with headquarters at Champaign, the position he held until his retirement in 1940.

R. M. Houston, general agent of the Chicago Great Western, with headquarters at Houston, Tex., died on May 11, at Houston.

William Shea, retired superintendent of track maintenance of the Chicago, Milwaukee, St. Paul & Pacific, whose death on May 13, was reported in the *Railway Age* of May 22, was born at Eddyville, Iowa, on August 13, 1867, and entered railway service in 1881 as a water boy on the construction of the Humeston & Shenandoah (now part of the Chicago, Burlington & Quincy) in southwestern Iowa. He later served as foreman of a construction gang for the Milwaukee on the construction of the line between Cedar Rapids, Iowa, and Ottumwa. On November 11, 1884, he was appointed section foreman on the same line at North English, Iowa, and in August, 1887, he was promoted to



William Shea

extra gang foreman on the Kansas City division. Mr. Shea was advanced to roadmaster on the Chicago & Council Bluffs division in 1890, and on January 1, 1891, he was appointed roadmaster on the Middle district of the Kansas City division, with headquarters at Blakesburg, Iowa. In July, 1918, he was further advanced to general roadmaster of the Milwaukee system, with headquarters at Chicago. In January, 1930, Mr. Shea was appointed assistant engineer maintenance of way, and on May 1, 1935, his title was changed to superintendent of track maintenance, the position he held until his retirement on May 1, 1941.

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The abnormal rail transportation requirements of our armed forces have been quickly and efficiently met by American railroads, and constitute an important factor on our home front.

It is all the more remarkable when it is considered that, in addition, civilian passenger and freight traffic have also been abnormally high.

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THE SUPERHEATER COMPANY, LTD.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1943

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Maintenance of way and structures	Equipment	Traffic			1943	1942
Akron, Canton & Youngstown	171	\$399,196	\$104	\$418,372	\$46,665	\$28,387	\$15,897	48.0	\$217,545	\$140,146	\$123,895
Alton	171	1,412,918	426	1,417,902	175,187	120,204	66,606	54.8	666,860	438,925	204,601
Alton	959	1,951,699	706,287	2,657,986	350,425	385,425	58,203	60.8	1,173,334	1,462,733	1,924,270
Alton	959	3,327,213	2,536,954	5,864,167	1,163,552	1,635,727	201,372	58.3	5,022,058	4,002,864	1,969,220
Atchison, Topeka & Santa Fe System	13,148	25,998,038	8,430,297	34,428,335	3,675,499	5,040,027	508,775	51.3	18,155,383	5,433,265	5,145,355
Atlanta & West Point	13,157	104,403,717	29,189,007	133,592,724	13,234,841	19,760,018	2,003,484	51.6	70,001,063	21,249,065	20,143,128
Atlanta & West Point	93	268,550	124,766	393,316	40,820	37,139	9,106	53.6	199,275	70,615	42,799
Atlanta & West Point	93	1,088,140	448,562	1,536,702	149,551	154,522	37,296	54.0	780,463	276,167	167,226
Western of Alabama	133	257,840	136,306	394,146	44,722	41,177	9,851	55.1	193,725	66,048	56,587
Atlanta, Birmingham & Coast	133	1,100,694	480,111	1,580,805	173,629	178,050	39,430	56.2	753,206	268,506	220,187
Atlanta, Birmingham & Coast	639	575,760	60,929	636,689	71,735	76,992	25,359	50.2	264,006	161,445	118,972
Atlanta, Birmingham & Coast	639	2,212,276	239,366	2,451,642	297,425	292,647	102,370	63.4	934,852	543,041	365,992
Atlantic Coast Line	4,965	9,658,354	3,792,747	13,451,101	945,301	1,610,078	165,483	45.0	7,823,967	3,233,967	1,631,777
Atlantic Coast Line	4,965	38,226,543	13,150,778	51,377,321	3,725,233	6,170,475	666,933	46.1	29,309,598	9,809,598	7,611,397
Atlantic Coast Line	343	365,424	15,072	380,496	38,459	49,455	10,001	54.1	178,680	106,656	92,538
Atlantic Coast Line	343	1,413,293	49,850	1,463,143	152,835	189,333	40,017	55.7	660,780	390,780	391,361
Baltimore & Ohio	6,150	26,282,035	2,990,897	29,272,932	3,366,981	5,434,696	486,631	62.7	11,545,875	7,735,327	7,070,676
Baltimore & Ohio	6,150	97,294,491	11,345,821	108,640,312	12,126,384	21,553,393	1,772,137	65.4	39,789,000	25,719,824	23,407,147
Baltimore & Ohio	24	789,060	111,583	900,643	20,388	30,431	1,315	60.6	119,877	79,403	64,834
Baltimore & Ohio	24	789,060	424,536	1,213,596	103,343	118,631	47,066	67.5	527,867	340,274	287,086
Bangor & Aroostook	602	678,437	72,323	750,760	114,918	93,988	4,240	53.8	360,158	195,440	121,367
Bangor & Aroostook	602	3,193,601	268,504	3,462,105	428,857	428,857	21,586	51.6	1,729,583	969,341	984,884
Bangor & Aroostook	214	1,028,909	1,697	1,030,606	156,356	786,826	13,678	119.5	-202,709	-262,032	790,915
Bangor & Aroostook	214	3,924,700	7,447	3,932,147	537,738	3,151,922	51,362	123.1	-918,101	-1,119,510	-437,229
Boston & Maine	1,825	5,294,009	1,427,458	6,721,467	1,018,474	1,116,171	80,658	65.6	2,532,278	1,513,246	1,261,723
Boston & Maine	1,825	20,218,505	5,644,396	25,862,901	3,854,656	4,251,936	308,284	67.5	9,198,615	5,530,861	4,370,199
Boston & Maine	228	200,985	66,892	267,877	29,581	25,763	2,624	58.8	116,830	104,414	73,678
Boston & Maine	228	675,523	238,416	913,939	104,631	93,233	10,296	62.7	360,074	313,488	212,471
Cambria & Indiana	35	165,936	.....	165,936	13,187	69,971	489	65.86	56,658	-36,557	39,607
Canadian Pacific Lines in Maine	234	513,883	51,935	565,818	48,914	287,114	2,030	64.32	245,884	-127,942	174,829
Canadian Pacific Lines in Maine	234	1,675,682	176,223	1,851,905	46,783	71,826	185,221	54.3	268,231	247,225	203,177
Canadian Pacific Lines in Maine	234	1,932,426	176,223	2,108,649	175,108	250,929	2,670	56.8	835,178	754,553	631,227
Canadian Pacific Lines in Vermont	90	112,420	11,588	124,008	38,049	38,049	2,283	114.1	-19,455	-27,578	-43,259
Canadian Pacific Lines in Vermont	90	349,430	45,230	394,660	102,418	108,748	8,948	130.4	-137,048	-170,546	-203,791
Central of Georgia	1,815	2,415,432	620,906	3,036,338	323,042	409,811	69,541	58.2	1,386,162	967,452	918,051
Central of Georgia	1,815	9,014,172	2,238,623	11,252,795	1,251,765	1,583,187	270,334	60.6	4,843,288	3,389,240	3,208,457
Central of New Jersey	657	4,460,826	604,652	5,065,478	539,508	888,967	54,767	68.2	1,709,608	961,749	627,364
Central of New Jersey	657	17,060,125	2,414,605	19,474,730	2,189,764	3,445,467	202,402	72.0	5,792,086	3,191,214	2,140,802
Central Vermont	422	602,124	64,000	666,124	97,774	107,949	10,069	70.4	212,378	167,689	116,904
Central Vermont	422	2,357,850	264,000	2,621,850	393,954	453,314	40,110	75.7	681,387	505,265	350,838
Chesapeake & Ohio	3,088	15,218,361	1,466,317	16,684,678	1,599,809	2,854,067	123,854	51.4	8,464,640	2,805,977	3,197,998
Chesapeake & Ohio	3,091	58,396,694	5,763,211	64,159,905	6,136,221	11,033,395	873,492	52.5	31,454,344	10,508,735	12,455,738
Chesapeake & Ohio	912	2,077,664	502,583	2,580,247	269,344	353,499	60,983	57.8	1,815,799	729,799	461,406
Chesapeake & Ohio	912	7,657,948	1,966,373	9,624,321	978,712	1,421,487	237,221	60.0	4,192,856	2,561,856	1,633,896
Chicago & Illinois Midland	131	532,216	1,344	533,560	62,291	73,928	20,583	54.0	256,776	83,322	89,892
Chicago & Illinois Midland	131	2,068,160	4,994	2,073,154	211,360	211,360	87,929	54.0	997,764	330,290	269,735
Chicago & North Western	8,100	9,315,296	2,601,520	11,916,816	1,489,574	1,967,049	199,430	61.2	5,106,291	2,861,245	2,887,210
Chicago & North Western	8,100	35,882,219	9,072,975	44,955,194	6,005,191	7,943,156	792,797	65.4	17,128,503	9,744,457	9,444,367
Chicago, Burlington & Quincy	9,030	13,171,377	2,271,151	15,442,528	2,469,887	2,261,311	272,703	57.1	7,306,348	3,889,941	3,628,337
Chicago, Burlington & Quincy	9,031	52,245,549	8,675,820	60,921,369	7,265,769	8,443,850	1,032,821	53.2	31,146,251	16,550,952	15,624,083
Chicago Great Western	1,501	2,205,985	180,829	2,386,814	284,979	284,979	58,008	58.6	1,061,038	493,923	303,973
Chicago Great Western	1,501	8,325,550	786,353	9,111,903	1,207,603	1,124,822	246,281	62.1	3,694,697	1,894,434	1,164,172
Chicago, Indianapolis & Louisville	541	976,540	96,211	1,072,751	114,464	177,332	30,646	60.1	459,401	380,563	330,987
Chicago, Indianapolis & Louisville	541	3,727,641	366,655	4,094,296	419,551	688,382	130,153	61.2	1,713,530	1,475,059	1,174,608

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1943—CONTINUED

Chicago, Indianapolis & Louisville.....April
4 mos.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation		Net railway operating income	
		Freight	Passenger (inc. misc.)	Total	Way and structures	Traffic	Trans- portation		Total	Operating income	1943	1942
Chicago, Milwaukee, St. Paul & Pacific.....April	10,765	\$13,944,481	\$2,159,769	\$17,703,182	\$2,336,730	\$255,259	\$5,164,218	60.0	\$7,089,929	\$5,473,929	\$5,326,117	\$1,931,700
Chicago, Rock Island & Pacific.....April	10,790	55,141,166	8,132,955	68,912,660	7,385,809	949,568	20,713,303	58.6	28,552,171	19,579,171	18,899,829	9,450,901
Chicago, St. Paul, Minneapolis & Omaha.....April	7,751	10,884,383	3,220,921	15,212,934	1,496,791	304,314	4,162,525	55.0	6,852,409	4,212,781	3,600,920	2,029,990
Cincinnati Railroad.....April	7,768	41,203,967	11,726,954	57,069,563	7,274,693	1,232,331	16,328,523	55.8	25,241,545	17,489,909	15,563,613	7,679,397
Cleveland & Southern.....April	1,624	1,725,632	282,294	2,147,610	309,641	40,134	768,087	70.1	642,572	513,813	472,601	51,775
Columbus & Greenville.....April	1,627	6,818,406	1,095,784	8,459,983	1,044,230	160,701	3,390,321	73.5	2,248,626	1,731,917	1,471,408	388,373
Colorado & Southern.....April	302	1,109,659	17,938	1,137,713	97,985	21,766	214,035	45.6	619,421	494,319	502,997	474,891
Fort Worth & Denver City.....April	804	4,435,022	48,877	4,510,087	343,194	86,954	869,706	44.1	2,027,314	2,027,314	2,060,451	1,763,695
Great Northern.....April	748	753,100	265,383	1,112,538	129,444	14,700	321,529	61.5	428,510	270,055	248,262	178,866
Green Bay & Western.....April	748	2,933,356	978,438	4,365,379	436,550	61,594	1,284,188	60.4	1,687,646	1,101,752	1,016,711	550,510
Gulf & Ship Island.....April	804	720,076	393,480	1,212,460	132,736	24,607	272,634	48.0	632,299	368,235	329,978	122,087
Indiana Harbor & Chicago Canal.....April	804	2,503,013	1,526,058	4,420,640	467,304	95,058	1,061,450	51.5	2,142,823	1,239,234	1,095,444	629,264
Not Yet Filed												
Colorado & Wyoming.....April	168	110,629	8,435	127,788	30,159	3,368	39,828	80.8	24,548	7,777	9,332	—11,186
Columbus & Greenville.....April	168	457,806	27,287	519,842	93,524	14,156	161,282	76.2	123,656	46,431	50,039	—7,582
Delaware & Hudson.....April	848	3,811,037	152,921	4,070,251	372,596	42,840	1,284,043	66.1	1,378,759	835,224	838,001	762,856
Delaware, Lackawanna & Western.....April	848	14,399,659	601,128	15,403,800	1,527,385	175,188	5,086,874	69.8	4,654,172	2,788,318	2,778,502	2,765,029
Denver & Rio Grande Western.....April	974	5,470,737	834,141	6,970,627	934,410	109,007	2,480,316	62.4	2,621,469	1,336,469	1,263,886	1,175,277
Denver & Salt Lake.....April	981	20,225,636	3,282,937	25,944,344	2,304,806	429,133	9,812,020	64.9	9,104,783	4,501,783	4,184,801	3,057,842
Detroit & Mackinac.....April	2,405	4,838,788	824,538	5,902,193	496,009	95,157	1,497,084	53.2	2,760,726	1,631,469	1,525,031	1,000,364
Detroit & Toledo Shore Line.....April	2,405	17,978,298	3,086,166	21,942,736	1,603,541	371,983	6,181,067	56.4	9,572,319	6,066,621	5,469,693	2,974,805
Duluth, Missabe & Iron Range.....April	232	197,194	6,278	215,505	32,758	2,731	67,540	79.6	44,035	15,253	60,557	2,790
Duluth, Winnipeg & Pacific.....April	232	970,567	32,486	1,048,344	147,791	10,618	328,046	69.4	320,440	205,600	373,465	257,898
Elgin, Joliet & Eastern.....April	243	56,909	9,706	77,035	14,343	767	27,577	84.3	12,126	3,987	2,761	10,364
Erie.....April	243	234,483	34,701	310,427	51,904	3,557	116,722	83.1	52,108	23,526	13,954	35,987
Florida East Coast.....April	50	358,651	360,230	718,881	25,608	9,049	88,619	46.4	193,242	131,209	78,023	35,155
Georgia Railroad.....April	50	1,629,860	.....	1,629,860	112,064	36,759	376,759	40.3	976,001	612,612	371,038	311,198
Grand Trunk Western.....April	465	738,377	1,030	786,762	92,356	14,082	168,328	52.4	374,426	208,475	209,841	136,226
Green Bay & Western.....April	465	3,284,296	4,045	3,514,453	353,701	56,721	734,111	47.3	1,853,789	1,042,361	996,185	741,305
Gulf & Ship Island.....April	546	1,614,372	12,483	1,885,436	1,205,210	16,696	1,117,018	23.6	—2,500,088	—2,844,441	—2,690,230	119,471
Indiana Harbor & Chicago Canal.....April	175	224,000	2,500	230,300	36,264	1,890	80,745	65.1	80,346	63,315	38,965	34,860
International Great Northern.....April	175	802,000	16,900	835,900	123,809	7,541	341,469	71.4	239,226	175,134	80,210	83,887
Missouri Pacific.....April	392	2,374,776	2,781,037	5,155,813	201,979	16,318	934,437	72.6	762,725	223,736	139,654	384,437
Norfolk & Western.....April	392	9,469,828	48	11,038,635	783,591	65,171	3,782,989	72.9	2,987,131	903,611	500,949	1,248,342
Ontario & Western.....April	2,242	12,001,183	784,144	13,515,293	1,044,578	205,496	4,260,725	58.8	5,572,104	2,751,431	2,038,836	2,165,903
Portland & Western.....April	2,242	44,610,590	2,823,194	50,117,658	3,700,672	827,946	16,533,439	60.9	19,611,315	8,734,595	6,808,027	6,602,490
Rock Island & Pacific.....April	682	1,624,547	1,279,271	3,145,944	282,462	42,714	745,813	45.9	1,702,298	1,126,185	953,251	735,811
St. Louis & San Francisco.....April	682	6,489,083	4,665,951	11,993,185	1,094,355	164,093	2,891,719	46.2	6,449,003	4,233,092	3,692,492	2,033,584
Seaboard Air Line.....April	329	702,923	171,151	917,603	76,793	21,295	283,425	53.6	425,363	396,425	379,501	289,345
Seaboard Coast Line.....April	329	2,741,495	656,194	3,584,036	296,760	86,435	1,123,126	54.0	1,648,900	1,537,644	1,438,533	897,350
Seaboard System.....April	408	153,196	4,950	162,795	43,901	9,782	53,820	83.1	27,446	18,098	6,509	31,781
Shenandoah Valley.....April	408	592,368	18,592	634,855	155,245	38,860	203,922	80.4	124,427	87,609	59,999	31,781
St. Paul & Northern Pacific.....April	1,026	2,659,000	321,000	3,159,000	376,656	35,022	1,064,085	65.6	1,086,156	682,287	640,942	207,654
St. Paul, Minneapolis & Omaha.....April	1,026	9,671,000	986,000	11,555,000	1,434,173	179,414	4,121,452	68.1	3,084,884	2,668,995	2,504,008	784,339
Union Pacific.....April	172	117,600	6,200	143,200	42,958	7,340	88,542	134.3	—49,066	—69,369	—113,264	—81,113
Canadian National Lines in New England.....April	172	489,700	26,000	586,300	177,558	2,431	354,789	124.0	—140,976	—222,188	—353,751	—190,590
Great Northern.....April	8,118	11,950,586	1,259,175	14,242,480	2,375,878	213,481	3,570,757	66.7	4,745,020	2,097,611	1,956,132	1,708,084
Green Bay & Western.....April	8,118	43,608,506	4,660,946	52,071,760	7,907,719	843,385	14,465,165	69.0	16,156,510	7,465,513	7,082,032	5,000,195
Gulf & Ship Island.....April	234	209,606	489	218,374	52,940	7,862	57,923	65.8	74,552	49,833	43,653	24,788
St. Louis & San Francisco.....April	234	835,603	2,005	868,858	165,842	31,948	238,306	62.0	329,401	233,324	208,071	129,937
Union Pacific.....April	259	138,643	44,035	204,512	67,597	2,774	90,606	101.0	—2,057	—22,181	—38,984	—19,184
Great Northern.....April	259	685,229	187,012	953,570	284,512	11,427	345,922	87.4	120,487	40,971	—29,918	38,166

Table continued on second left-hand page

PULLING TO TO WIN THE WAR AND



TOGETHER...

AND WRITE THE PEACE



ALL AMERICA is united in producing and delivering, with ever-increasing quantities and speed, the equipment, materials and supplies which are so vital to our armed forces. All industries, agriculture, transportation, et cetera, are being called upon to shoulder unprecedented responsibilities. By far the greatest burden of war-time production falls upon the railroads and anything which impedes transportation weakens the entire war effort.

Transportation must be kept at peak efficiency and General Motors Diesel Locomotives, in all classes of service, are doing an outstanding job. GM Diesel Switchers are preventing costly bottlenecks by speeding up heavy traffic through terminals. GM Diesel Road Locomotives in passenger service are doing their part in all-time record troop movements, and in freight service are making possible super-performances, such as — reduction in train miles as much as 50 percent — greater hauling capacity — faster schedules with fewer service delays — high availability — increased carrying capacity of existing track facilities without the expense of replacing rail or rebuilding bridge structures.

TRANSPORTATION IS VITAL FOR VICTORY

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS CORPORATION
LA GRANGE, ILLINOIS, U. S. A.



REVENUES AND EXPENSES OF RAILWAYS

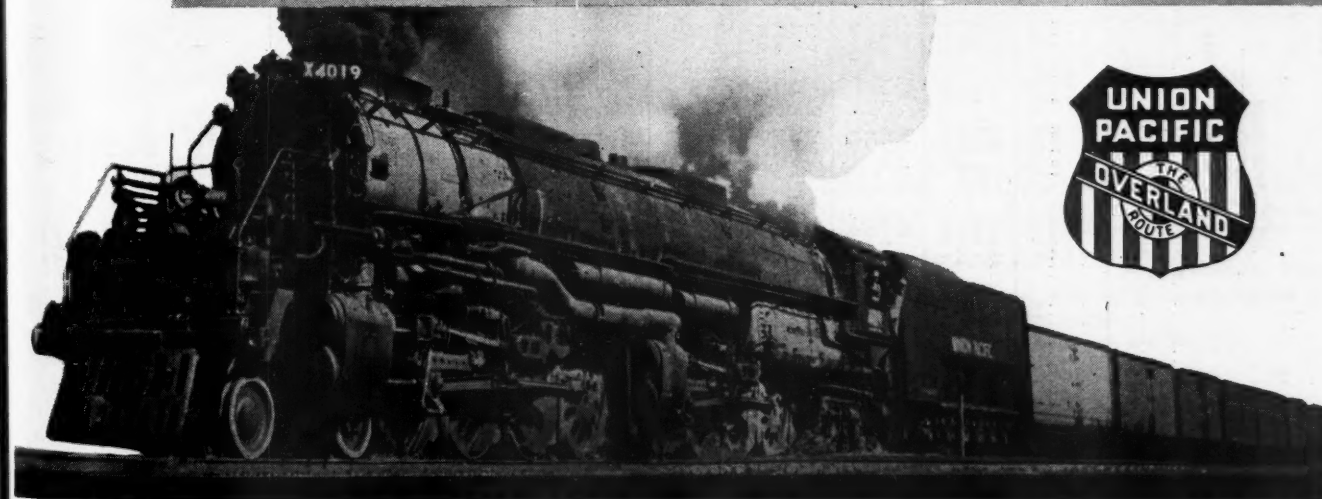
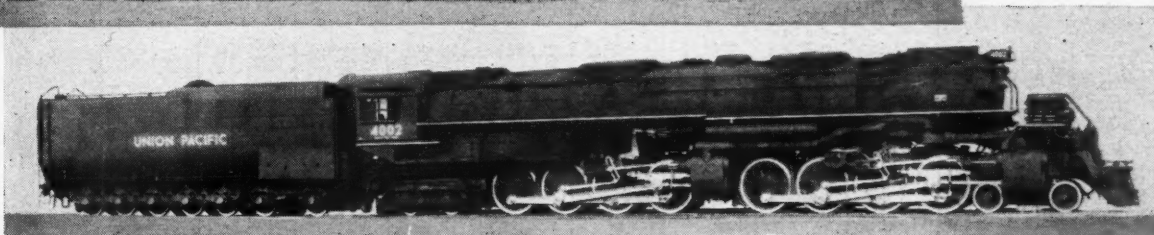
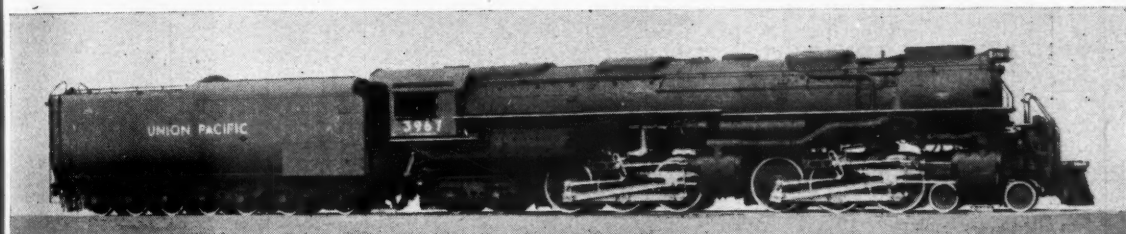
MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from operation	Net railway operating income	
		Freight	Passenger	Total (inc. m. c.)	Maintenance of way and structures	Equipment	Traffic			1943	1942
Gulf, Mobile & Ohio	1,972	\$3,231,167	\$252,966	\$3,588,636	\$509,419	\$473,936	\$79,616	55.2	\$1,607,764	\$706,998	\$497,727
Illinois Central	1,972	12,153,654	811,790	13,336,434	1,831,328	1,850,289	325,061	58.3	5,559,875	2,694,850	1,859,998
Illinois Central	4 mos.	13,469,824	2,447,172	17,046,756	2,679,800	3,144,469	208,811	66.2	5,754,528	3,174,686	2,864,882
Illinois Central	4 mos.	55,076,574	9,476,901	68,560,065	10,172,648	12,254,222	821,333	65.0	23,993,240	13,501,241	11,955,856
Yazoo & Mississippi Valley	1,525	2,402,021	305,559	2,857,198	427,183	371,343	812,953	61.0	1,113,979	599,193	505,566
Illinois Central System	1,525	10,599,977	1,220,098	12,367,622	1,814,286	1,521,867	160,881	59.2	5,053,962	2,847,014	3,344,450
Illinois Central System	4 mos.	15,871,845	2,752,733	19,903,954	3,106,983	3,515,812	349,502	65.5	6,868,507	3,771,657	2,609,889
Illinois Central System	4 mos.	65,676,551	10,696,999	80,927,687	11,986,934	13,776,089	962,214	64.1	29,043,202	16,333,594	14,319,145
Illinois Terminal	476	598,835	172,160	846,126	88,066	85,381	18,571	54.0	388,853	132,645	114,944
Kansas City Southern	476	2,151,462	701,670	3,118,237	329,133	329,133	73,314	56.1	1,366,868	509,625	459,419
Kansas City Southern	4 mos.	3,503,491	491,578	4,228,505	552,067	466,854	57,154	48.1	2,194,713	1,086,713	827,141
Kansas City Southern	4 mos.	12,368,454	1,478,485	14,684,395	2,363,917	1,721,210	232,497	54.8	6,637,872	3,555,872	2,546,586
Kansas, Oklahoma & Gulf	328	367,381	1,284	371,978	66,095	19,601	10,066	49.8	186,708	115,929	79,066
Lake Superior & Ishpeming	328	1,449,334	4,829	1,468,557	172,095	71,537	39,048	42.6	842,781	510,884	396,333
Lake Superior & Ishpeming	4 mos.	77,996	130	145,001	27,605	39,837	35,840	77.4	32,710	7,142	15,997
Lake Superior & Ishpeming	4 mos.	176,556	661	252,469	110,402	168,209	2,601	175.7	—191,004	—292,241	—256,559
Lehigh & Hudson River	96	322,275	960	324,295	36,908	30,199	83,261	49.9	162,526	63,081	35,106
Lehigh & Hudson River	4 mos.	1,552,065	1,530	1,157,205	114,377	119,923	321,473	51.8	557,246	230,390	127,043
Lehigh & Hudson River	4 mos.	5,557,686	.....	5,557,686	47,230	111,855	149,373	60.0	222,367	114,679	100,571
Lehigh & Hudson River	4 mos.	2,031,126	.....	2,042,210	170,629	446,546	602,958	64.7	720,544	367,187	450,817
Lehigh Valley	1,260	6,891,785	540,429	7,947,271	892,461	1,192,541	103,300	61.1	3,092,149	1,732,005	1,350,866
Louisiana & Arkansas	1,260	25,305,037	1,827,653	29,144,022	2,850,722	4,677,485	431,686	64.6	10,322,978	6,192,680	4,641,479
Louisiana & Arkansas	4 mos.	1,406,324	135,220	1,601,654	378,431	170,446	29,764	59.5	649,016	267,422	193,028
Louisiana & Arkansas	4 mos.	5,719,536	465,663	6,422,363	1,445,660	658,883	121,504	57.5	2,732,391	1,068,795	795,851
Louisville & Nashville	4,745	12,960,409	4,025,713	17,986,122	1,561,876	2,543,619	202,937	52.7	8,494,560	2,157,566	2,355,913
Louisville & Nashville	4 mos.	50,491,125	38,447,987	6,106,914	6,106,914	10,183,286	792,623	55.0	30,803,525	7,836,709	8,727,175
Maine Central	988	284,130	235,065	1,619,477	214,619	230,702	508,629	62.7	604,064	344,887	212,052
Maine Central	4 mos.	5,170,144	942,256	6,527,132	846,874	993,388	48,851	64.2	2,339,790	1,335,934	1,146,080
Midland Valley	351	179,631	887	182,737	28,322	12,158	41,025	48.3	94,527	65,024	56,984
Minneapolis & St. Louis	351	636,978	1,703	650,636	69,992	48,389	160,418	66.5	344,284	231,978	199,061
Minneapolis & St. Louis	4 mos.	1,158,839	32,379	1,235,797	280,856	168,004	8,855	66.5	413,982	299,958	222,479
Minneapolis & St. Louis	4 mos.	4,554,377	116,249	4,835,642	634,282	646,218	236,939	64.8	1,700,231	1,345,873	1,299,001
Minneapolis, St. Paul & Sault Ste. Marie	4,277	3,372,753	185,061	3,872,881	527,501	574,316	67,742	67.0	1,258,210	853,301	837,076
Duluth, South Shore & Atlantic	4,277	12,127,561	717,924	13,770,751	2,027,489	2,361,302	275,514	75.3	3,404,435	2,068,165	1,338,128
Duluth, South Shore & Atlantic	4 mos.	282,770	28,389	334,552	48,132	46,964	8,109	67.3	109,315	90,368	96,914
Duluth, South Shore & Atlantic	4 mos.	1,077,128	88,779	1,245,793	209,920	202,960	31,576	76.6	291,538	213,294	188,342
Spokane International	152	176,010	6,376	192,889	34,837	9,243	42,246	49.2	97,969	36,718	27,317
Mississippi Central	152	676,536	22,740	734,474	97,118	34,391	150,899	43.0	416,770	157,207	126,960
Mississippi Central	4 mos.	136,702	9,626	148,944	26,690	14,450	34,851	60.0	59,585	37,038	29,251
Mississippi Central	4 mos.	550,458	21,715	581,429	59,805	38,055	128,556	58.9	236,890	148,961	118,798
Missouri & Arkansas	205,608	3,147	215,484	49,921	22,226	6,759	66,462	71.0	62,474	44,343	27,007
Missouri-Illinois	172	280,025	351	281,979	176,069	76,412	28,032	73.3	205,918	133,322	73,626
Missouri-Illinois	4 mos.	1,030,630	1,389	1,037,559	122,079	130,776	13,127	48.5	145,336	63,720	56,882
Missouri-Kansas-Texas Lines	3,293	4,772,339	1,018,938	6,259,855	1,917,625	795,565	123,118	52.2	495,459	189,319	154,577
Missouri-Kansas-Texas Lines	4 mos.	19,844,543	4,141,448	25,767,493	6,064,993	3,515,548	7,356,701	77.8	1,388,587	933,967	402,147
Missouri Pacific	7,096	14,692,656	2,794,550	18,723,292	1,779,334	2,215,769	4,703,132	69.7	7,818,981	3,077,028	2,459,700
Missouri Pacific	4 mos.	57,380,487	9,785,527	71,828,409	6,516,717	8,474,891	19,034,736	50.5	34,795,322	19,156,122	15,681,397
Gulf Coast Lines	1,734	3,109,497	286,797	3,532,389	455,100	295,420	715,646	45.1	1,936,892	810,949	556,530
International Great Northern	1,155	12,092,015	1,139,750	13,793,196	1,672,340	1,102,181	2,963,422	45.29	7,545,915	3,337,281	2,232,242
International Great Northern	4 mos.	1,884,880	431,038	2,511,800	298,945	288,347	745,980	57.6	1,064,930	529,350	355,080
International Great Northern	4 mos.	7,341,793	1,567,974	9,659,978	1,126,056	1,115,945	2,697,635	55.8	4,266,553	2,145,631	1,580,743
Monongahela	171	561,066	1,717	565,074	65,100	45,982	130,503	43.5	319,052	165,370	143,554
Monongahela	4 mos.	2,338,460	6,126	2,354,356	242,993	180,352	569,850	43.5	1,340,968	715,419	376,229

A FLEET OF EIGHTY NEW ENGINES INCREASES FIGHTING STRENGTH OF THE UNION PACIFIC

WITH an added fleet of 80 modern high-speed heavy-duty Alco-built freight locomotives, sixty of the 4-6-6-4 type, and twenty 4-8-8-4 "Big Boys", Union Pacific is speeding trainload after trainload of armament, military supplies and troops over "The Strategic Middle Route" to and from all the West.

Twenty-five more of the 4-6-6-4 type are on order.



AMERICAN LOCOMOTIVE

MANUFACTURERS OF MOBILE POWER

STEAM, DIESEL AND ELECTRIC LOCOMOTIVES, MARINE DIESELS, TANKS, GUN CARRIAGES & OTHER ORDNANCE

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income				
		Freight	Passenger	Total (inc. misc.)	Maintenance of Way and structures	Equipment	Traffic			Trans- portation	Total	Operating income	1943	1942
Montour	51	\$224,321	.....	\$225,180	\$13,779	\$52,015	\$867	\$59,012	\$133,227	59.2	\$91,953	\$24,617	\$65,798	\$82,591
Nashville, Chattanooga & St. Louis.....	1,090	2,455,715	\$583,567	3,286,310	49,731	216,296	3,590	257,045	557,963	60.3	1,249,664	328,242	245,368	297,540
.....	1,090	9,664,602	2,408,897	13,017,245	1,391,998	2,085,002	295,486	3,726,399	7,871,042	60.5	5,146,203	2,634,467	2,319,371	936,584
Nevada Northern	165	55,496	913	59,056	11,981	2,945	1,202	10,215	30,685	52.0	28,371	3,771	6,336	11,582
.....	165	211,341	4,443	225,572	40,648	12,794	4,778	37,507	112,227	49.8	113,345	38,581	48,211	49,808
New York Central	10,786	41,157,119	12,342,387	58,796,736	6,529,160	9,370,339	631,018	17,997,823	36,397,139	61.9	22,399,597	9,119,492	7,561,566	5,657,668
.....	10,808	159,376,650	42,504,675	221,831,371	24,962,233	36,562,814	2,507,540	72,789,073	144,290,810	65.0	77,540,561	36,001,929	30,755,720	17,983,274
Pittsburgh & Lake Erie	232	2,915,846	99,739	3,102,971	277,404	836,206	42,179	787,714	2,040,412	65.8	1,062,559	78,682	630,962	642,716
.....	233	10,994,031	382,005	11,733,000	1,011,084	3,330,222	162,790	3,274,931	8,111,412	69.1	3,621,388	207,793	2,291,513	1,860,953
New York, Chicago & St. Louis.....	1,688	8,019,891	221,248	8,384,453	635,779	1,019,447	130,701	2,272,010	4,444,052	50.6	4,140,401	1,685,546	1,171,396	510,979
.....	1,688	31,920,871	786,419	33,271,217	2,571,004	4,019,945	158,089	9,347,119	17,137,739	51.5	16,133,478	6,668,365	4,616,229	4,185,412
New York, New Haven & Hartford.....	1,838	8,483,722	5,463,992	15,105,770	1,509,639	1,908,579	104,334	4,474,328	8,635,574	57.2	6,470,196	4,348,991	3,437,711	2,664,786
.....	1,838	31,694,655	20,804,876	56,914,116	5,806,298	7,515,092	486,079	17,670,867	33,908,623	59.6	23,005,293	14,561,021	10,766,450	7,954,023
New York Connecting	21	208,802	.....	208,802	104,368	10,951	.....	11,502	158,872	67.8	75,451	16,698	17,781	704,382
.....	21	773,997	.....	865,449	274,343	56,385	.....	176,931	514,316	59.4	351,133	55,101	449,951	712,877
New York, Ontario & Western.....	546	560,919	22,890	639,717	87,243	134,331	21,343	289,857	561,535	87.8	78,182	45,723	31,351	83,347
.....	546	2,162,433	84,569	2,486,351	330,278	518,427	85,901	1,233,900	2,294,340	92.3	191,991	57,571	62,670	5,378
New York, Susquehanna & Western.....	262	397,812	32,317	460,215	33,253	34,678	3,815	164,890	250,856	54.5	209,359	159,322	62,143	70,838
.....	262	1,702,034	152,138	1,948,493	123,418	128,667	15,385	701,093	1,029,327	52.8	919,166	655,293	349,267	213,231
Norfolk & Western	2,156	11,745,484	1,228,531	13,366,202	1,260,301	2,564,371	172,402	2,849,872	7,158,812	53.6	6,207,388	1,297,143	2,159,795	1,671,094
.....	2,156	45,089,327	4,636,272	51,325,351	4,827,758	9,874,895	682,001	11,179,861	27,756,347	54.1	23,569,004	4,893,480	7,824,817	6,872,476
Norfolk Southern	734	601,283	24,531	647,511	164,057	76,625	29,217	198,953	227,937	76.7	150,908	89,832	65,445	115,015
.....	734	2,450,932	97,440	2,641,746	583,069	303,051	118,206	818,609	1,929,767	73.0	711,979	433,493	319,959	274,436
Northern Pacific	6,868	9,594,014	1,093,562	11,592,653	1,468,288	1,966,200	176,081	3,079,882	7,143,499	61.6	4,449,154	2,189,808	2,585,766	1,562,369
.....	6,868	35,584,608	4,103,406	43,166,424	5,279,034	7,597,404	673,262	12,439,898	28,043,553	64.4	15,361,371	7,492,034	9,198,949	5,843,470
Northwestern Pacific	331	427,238	11,707	460,635	166,243	51,569	2,196	146,726	374,938	81.2	86,537	64,026	44,624	55,638
.....	331	1,707,412	46,170	1,827,431	629,244	202,649	9,505	563,583	1,435,286	78.4	394,145	302,888	197,322	15,939
Oklahoma City-Ada-Atoka	132	100,676	583	102,802	18,123	3,880	1,226	24,173	51,480	50.1	51,322	32,590	21,070	8,592
.....	132	472,806	583	480,578	7,133	17,763	4,954	117,783	228,733	47.6	251,795	151,081	90,687	75,326
Pennsylvania	10,180	57,632,907	19,012,034	82,787,598	8,236,344	13,971,296	909,022	29,576,160	55,137,007	66.6	27,650,591	12,688,600	11,721,988	11,657,654
.....	10,182	210,633,966	70,647,119	303,605,955	33,450,948	53,721,538	3,683,698	116,149,023	217,265,639	71.6	86,340,316	34,716,216	30,666,606	22,152,731
Long Island	378	1,144,995	1,858,550	3,161,276	498,440	474,361	41,035	1,440,855	2,562,994	81.1	598,282	252,290	34,357	128,777
.....	378	4,215,321	7,433,956	12,250,233	2,278,187	1,915,582	151,351	5,698,023	10,314,236	84.2	1,935,997	827,136	31,521	168,105
Pennsylvania-Reading Seashore Lines	399	511,122	286,207	827,623	146,088	113,528	6,823	447,332	735,017	88.8	92,606	5,534	103,007	171,728
.....	400	1,864,747	1,041,253	3,019,694	602,716	453,056	28,233	1,652,575	2,826,799	93.6	192,895	172,478	486,101	714,105
Pere Marquette	2,032	4,260,850	290,354	4,552,539	601,975	774,146	66,215	1,479,793	3,061,011	64.4	1,691,528	825,786	718,000	502,122
.....	2,032	15,961,378	1,038,925	17,808,920	2,142,246	2,981,182	268,188	5,907,288	11,837,024	66.5	5,971,896	2,834,849	2,545,973	1,500,439
Pittsburgh & Shawmut.....	97	127,415	.....	127,415	25,251	20,788	1,881	32,627	85,941	67.2	41,939	26,801	23,652	42,978
.....	97	442,886	.....	443,920	71,144	80,672	7,787	116,685	296,551	66.8	147,369	92,337	88,235	115,198
Pittsburgh & West Virginia	136	659,331	.....	678,793	83,444	94,705	19,448	156,870	384,568	56.7	294,225	174,751	174,478	123,658
.....	136	2,940,159	79	2,617,596	333,814	424,299	77,278	691,765	1,629,661	62.3	987,935	621,015	591,110	505,971
Pittsburg, Shawmut & Northern.....	190	126,486	.....	128,647	18,976	24,935	913	45,518	94,935	73.8	37,712	27,316	20,128	20,083
.....	190	484,936	.....	493,104	73,777	98,148	3,942	177,742	377,916	76.6	115,188	90,068	62,341	53,793
Reading	1,419	9,035,711	739,567	10,242,096	999,760	1,882,922	79,070	3,323,501	6,484,494	63.5	3,757,602	2,304,092	2,057,339	2,103,147
.....	1,420	34,142,169	3,014,037	39,021,597	3,761,981	7,547,343	324,070	12,997,537	25,433,695	65.2	13,587,902	7,981,580	7,159,155	5,770,019
Richmond, Fredericksburg & Potomac	118	1,478,826	1,346,943	3,094,321	191,048	260,558	11,488	700,207	1,264,023	40.8	1,830,298	478,647	302,392	522,377
.....	118	6,350,382	4,813,099	12,112,634	578,996	950,205	45,366	2,895,254	4,857,713	40.1	7,254,921	2,161,661	1,404,024	1,607,722
Rutland	407	286,479	45,920	306,674	51,215	70,580	11,578	186,137	341,932	86.2	54,742	30,377	38,073	67,952
.....	407	983,672	200,693	1,446,692	194,236	294,862	43,629	712,762	1,299,518	89.7	149,174	56,567	77,664	153,550

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153,350
77,064
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1,299,518
712,762
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407
4 mos.
4

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On the D.M. & I.R. LOCOMOTIVES



THE ten new 2-8-8-4 locomotives built by Baldwin for the Duluth, Missabe and Iron Range are the most powerful in the world.

Developing a tractive force of 140,000 lb., it is obvious that careful attention be given to all factors which would insure maximum efficiency. Application of HUNT-SPILLER *Air Furnace* GUN IRON Cylinder Bushings, Valve Bushings, Pistons and Piston Valves is highly significant.

Their resistance to wear and high super-heat temperatures will help to insure maximum efficiency, minimum fuel consumption and economical maintenance.

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Reg. U.S. Trade Mark

 - Cylinder Bushings
 - Cylinder Packing Rings
 - Pistons or Piston Bull Rings
 - Valve Bushings
 - Valve Packing Rings
 - Valve Bull Rings
 - Crosshead Shoes
 - Hub Liners
 - Shoes and Wedges
 - Floating Rod Bushings

Finished Parts

 - Dunbar Sectional Type Packing
 - Duplex Sectional Type Packing
 - for Cylinders and Valves
 - (Duplex Springs for Above
 - Sectional Packing)
 - Cylinder Snap Rings
 - Valve Rings, All Shapes
 - Light Weight Valves
 - Cylinder Liners and Pistons
 - for Diesel Service

HSGI Cylinder Bushings and Valve Bushings ready for application on the new D.M. & I.R. locomotives.

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V. W. Ellet, President E. J. Fuller, Vice-Pres. & Gen. Mgr.

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Air Furnace HUNT-SPILLER GUN IRON

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1943—CONTINUED

Railway Age—June 5, 1943